



COUNTY BOROUGH OF BOURNEMOUTH,  
1910.

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# ANNUAL REPORT

OF THE  
MEDICAL OFFICER OF HEALTH

WITH WHICH ARE INCLUDED THE REPORTS  
OF THE

BOROUGH BACTERIOLOGIST,  
CHIEF SANITARY INSPECTOR,  
AND  
PUBLIC ANALYST.

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BOURNEMOUTH :  
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# County Borough of Bournemouth

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## ANNUAL REPORT

OF THE

## Medical Officer of Health FOR THE YEAR 1910.

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Health Department,  
Borough Offices,  
March, 1911.

TO THE MAYOR AND TOWN COUNCIL,  
BOURNEMOUTH.

Gentlemen—

I have the honour of presenting to you my Annual Report on the health of the County Borough of Bournemouth—the last of a series of reports which have annually been presented to you during the past 37 years (excepting the four years immediately preceding the incorporation of the town as a borough, during which period the office was held by Dr. Kinsey Morgan). The sanitary history of the town through this long period can be known by a reading through of these annual reports, which record that the town has been preserved and guarded against the invasion and extension of any epidemic disease which might

have endangered its reputation. It goes without saying that at times we have had to contend with influences and dangers which, had they not been successfully grappled with, might have gained a hold and endangered our reputation.

### POPULATION

I am again confronted by the task which becomes increasingly difficult with the lapse of time since the last census, viz., that of arriving at anything like a correct and accurate estimate of the population. I propose, therefore, to base my estimate on the hypothesis that the proportion of persons per house is the same now as at the time of the last census, viz., 5.50 persons per occupied house. The population arrived at by this method of estimating, which I consider a fair one, would be 81,812.

### SITUATION AND CLIMATE.

When I first became associated with this Borough as Medical Officer, in 1874, the population was about 8,000, and its rateable value £30,000: the almost unprecedented growth of its population in some measure indicates its advancing and increasing popularity. Its rateable value is now £721,969.

In these early days of Bournemouth's genesis, it was well recommended by eminent men in the faculty as a locality very beneficial in many cases of illness and physical breakdown. Bournemouth's sheltered position on the South Coast, combined with the natural protection afforded by the pine woods, are amongst its most valuable characteristics. The town is built on a sandy sub-soil, the dry and porous nature of which makes it an ideal formation from the hygienic standpoint.

The reputation gained has gradually been increased and sustained, until we find at the present

time that its fame as a Sanatorium has become international.

### AREA.

The area of the Sanitary District of Bournemouth in the year 1856 was 1,140 acres; the area was increased in the years 1876, 1884, 1889, and 1901, and the area of the County Borough at the present time is 5,850 acres. On our present population of 81,812 this gives us 13.93 persons per acre.

### BUILDINGS.

The following table shows the number of new buildings erected in the County Borough during the past 10 years. Your Council will note that there has been a continual increase in the number of buildings erected each year, this increase occurring mainly in the outlying districts.

Year	Houses	Large Additions, Stables, Workshops, and other Buildings	Total.
1900	174	97	271
1901	200	122	322
1902	294	99	393
1903	436	120	556
1904	440	106	546
1905	479	103	582
1906	493	98	591
1907	522	103	625
1908	549	90	639
1909	566	79	645
1910	536	156	692
	—	—	—
	4689	1173	5862

The figures for the year 1910 show a further slight increase in the number of births; the rate, however, remains low. My explanation of this moderate birth rate has been given in previous reports, and I do not think that I can add any further explanatory remarks. The total number of

births registered in the district was 1,276; of these 628 were boys and 648 girls.

The Birth Rate, calculated on the basis of 81,812 of population, is 15.59 per thousand.

### BIRTH RATE.

The Birth Rate for the past 10 years has been as follows:—

1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
18.9	16.11	17.6	17.2	16.3	17.68	16.52	14.73	15.17	15.59

### MORTALITY RATE.

Your Council will note with satisfaction that although the population has increased, the total deaths registered within the County Borough has diminished. The death rate on the population estimate is 10.64, which is favourable compared with the 11.46 rate of last year and the 12.26 rate of 1908. The total number of deaths registered from all causes was 871 and is made up as follows:—

Visitors	...	...	...	183
Residents	...	...	...	688
Total...	...	...	...	871

Thus to the death rate of 10.64 per thousand, the deaths of visitors contribute 2.23 and the residents 8.40 per thousand of the population.

The deaths for the two classes for the past ten years are as follows:—

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Visitors	183	296	196	260	227	191	208	206	181	183
Residents	370	553	554	612	609	780	619	728	728	688
	553	759	750	872	836	971	827	934	909	871

I herewith append a tabulated statement for the year 1910, showing the annual death rate per 1,000 from all causes, and from certain epidemic disease.

These may be contrasted with the returns from our own County Borough.

Death Rate.	Annual Rate per 1,000 Living.																		
	1	2	Crude.	Corrected.	Principal Epidemic Diseases 5-11.	Cols. 5-11.	Small Pox.	Measles.	7	Scarlet Fever.	8	Diphtheria.	9	Whooping Cough.	10	Enteric Fever.	11	Diarrhea.	Deaths under 1 year per 1,000 Births.
Columns.	1	2	3	4	5	6	7	8	9	10	11	12							
England & Wales	24.8	13.4	13.4	0.99	0.00	0.23	0.06	0.12	0.24	0.05	0.29	106							
77 Great Towns	25.0	13.4	14.3	1.23	0.00	0.31	0.08	0.12	0.29	0.05	0.38	115							
136 Smaller Towns	23.7	12.4	12.9	0.88	0.00	0.16	0.06	0.11	0.24	0.05	0.26	104							
England & Wales (less the 213 Towns)	..	25.0	13.6	12.8	0.74	0.00	0.15	0.05	0.12	0.17	0.05	0.20	96						
Bournemouth	..	15.59	10.64	—	0.26	0.00	0.01	0.13	0.04	0.00	0.07	72.8							

The following table will shew the rate per 1,000 of the deaths due to various causes for the past five years :—

DISEASE	1906.	1907.	1908.	1909.	1910.
Small-pox ...	... 0.00	0.0	0.0	0.0	0.00
Measles ...	... 0.1	0.0	0.03	0.08	0.00
Scarlet Fever ...	... 0.0	0.01	0.01	0.03	0.01
Whooping Cough ...	... 0.1	0.0	0.06	0.06	0.04
Diphtheria & Membranous Croup	0.07	0.09	0.14	0.11	0.13
Croup ...	... 0.0	0.00	0.00	0.00	0.00
Fevers { Typhus ...	... 0.0	0.00	0.00	0.00	0.00
{ Typhoid or Enteric ...	0.00	0.02	0.02	0.00	0.00
{ Other continued ...	0.0	0.00	0.00	0.00	0.00
Epidemic Influenza ...	... 0.05	0.04	0.02	0.02	0.00
Cholera ...	... 0.0	0.00	0.00	0.00	0.00
Plague ...	... 0.0	0.00	0.00	0.00	0.00
Diarrhoea ...	... 0.2	0.08	0.03	0.12	0.07
Enteritis ...	... 0.1	0.06	0.11	0.07	0.04
Gastritis ...	... —	—	—	0.06	0.02
Puerperal Fever ...	... 0.0	0.00	0.01	0.01	0.00
Erysipelas ...	... 0.0	0.01	0.00	0.05	0.02
Other Septic Diseases ...	0.0	0.00	0.00	0.00	0.00
Phthisis ...	... 1.46	1.53	1.64	1.89	1.36
Other Tubercular Diseases ...	0.4	0.48	0.57	0.15	0.24
Cancer (Malignant Disease) ...	1.07	0.85	1.08	0.95	1.10
Bronchitis ...	... 0.7	0.63	0.65	0.88	0.63
Pneumonia ...	... 1.07	0.72	0.96	0.59	0.58
Pleurisy ...	... 0.1	0.02	0.02	0.00	0.02
Other Diseases of Respiratory Organs ...	0.0	0.00	0.00	0.00	0.00
Alcoholism: Cirrhosis of Liver	0.1	0.05	0.15	0.05	0.11
Veneral Disease ...	0.04	0.01	0.01	0.03	0.02
Premature Birth ...	0.67	0.52	0.5	0.27	0.30
Diseases & Accidents of Parturition	0.08	0.06	0.10	0.06	0.11
Heart Disease ...	2.45	1.95	1.94	2.24	1.66
Accidents ...	0.41	0.24	0.34	0.17	0.11
Suicides ...	0.08	0.09	0.05	0.05	0.06
All other Causes ...	4.58	3.78	3.76	3.44	3.91

**Death Rate per 1,000 of the Population at various ages  
for the past 10 years.**

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Deaths under one year	1·68	1·94	1·5	1·92	1·39	2·11	1·28	1·39	1·38	1·13
,, 1 year & under 5	.34	.87	.66	.67	.66	.85	.46	.85	.65	.29
,, 5 ,, 15	.42	.35	.31	.43	.56	.53	.22	.28	.29	.34
,, 15 ,, 25	.82	.84	.90	.84	.87	.65	.65	.68	.49	.53
,, 25 ,, 65	5·42	4·77	5·15	5·89	5·30	5·52	4·65	5·46	4·33	4·16
,, 65 and upwards	3·09	3·54	3·31	3·81	3·86	4·49	4·02	3·60	4·33	4·16
Totals	11·68	12·31	11·83	13·56	12·64	14·15	11·28	12·26	11·47	10·61

In 1904 the total deaths under 1 year of age was	123
,, 1905	92
,, 1906	145
,, 1907	94
,, 1908	106
,, 1909	110
,, 1910	93*

\* Of these 25 were premature births, many living only a few minutes or days.

The Number of Suicides in 1904 was	...	...	4
1905	„	...	7
1906	„	...	6
1907	„	...	7
1908	„	...	4
1909	„	...	6
1910	„	...	5

Deaths from Accident in 1904	...	...	...	15
,"	1905	...	...	18
,"	1906	...	...	28
,"	1907	...	...	18
,"	1908	...	...	26
,"	1909	...	...	14
,	1910	...	...	9

The deaths recorded in the public and charitable institutions of the town during the past five years were as follows:—

Name of Institution.	Persons belonging to the District.					Persons not belonging to the District.					Totals for year.				
	9061	907	8061	909	1910	9061	907	8061	909	1910	9061	907	8061	909	1910
Sanitary Hospital ..	9	5	14	10	11	1	1	2	1	1	10	7	15	11	12
Royal National Sanatorium ..	1	0	0	0	0	4	2	2	5	4	5	2	2	5	4
Royal Victoria H'pital ..	21	18	14	22	31	17	19	19	18	20	38	37	33	40	51
Firs Home ..	2	3	2	1	1	15	13	13	15	7	17	16	15	16	8
Royal Boscombe and West Hants Hospital ..	29	25	31	23	36	12	13	17	16	10	41	38	48	39	46
S. Joseph's Home ..	0	0	0	1	0	0	4	1	2	1	0	4	1	3	1
Herbert Home ..	0	0	0	0	0	3	0	1	2	0	3	0	1	2	0
Hahnemann Home ..	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Springb'rne Orphanage ..	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Home of Good Hope..	11	3	3	1	2	7	6	5	1	3	18	9	8	2	5
House Beautiful Convalescent Home ..	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Victoria Home for Nurses ..	3	0	3	0	1	2	3	2	2	3	5	3	5	2	4
Cripples' Home ..	0	0	0	1	0	2	0	0	1	1	2	0	0	2	1
Sanatorium, P'kesd'wa Convent of the Cross, Pokesdown..	3	0	1	0	0	0	3	9	7	4	3	3	10	7	4
S. Luke's Home, Pokesdown..	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Cottage Home, Cottlands Road..	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0
Stagsden N'rsing H'me	No Record	2	No Record	9	No Record	9	No Record	9	No Record	9	No Record	11	No Record	11	No Record
Montserrat ..	"	"	"	"	5	"	"	"	"	5	"	"	"	"	10
White Lodge ..	"	"	"	"	1	"	"	"	"	1	"	"	"	"	2
Hartington ..	"	"	"	"	1	"	"	"	"	4	"	"	"	"	5
Aston Grays ..	"	"	"	"	3	"	"	"	"	2	"	"	"	"	5
Totals .. ..	80	55	69	59	95	63	66	70	72	75	143	121	139	130	170
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

There were 279 deaths recorded of persons at 70 years of age and upwards. 104 of the deaths were of persons who had attained the age of 80 years and upwards, the greatest age at death recorded being 98.

An ever increasing number of elderly people come to the town to pass the closing years of life: the climatic conditions in the winter being suitable to the aged, who are enabled to enjoy the benefits of our climate in their retirement. The following table in some measure testifies to the perfection of our climatic conditions, as also to the vigorous effect which it affords to old people.

10

		1904	1905	1906	1907	1908	1909	1910
Death at 70 years of age	...	14	11	14	11	13	13	24
„ 71	„	7	11	13	19	8	18	11
„ 72	„	16	14	23	16	19	15	20
„ 73	„	9	9	6	14	14	19	22
„ 74	„	12	21	12	10	14	20	19
„ 75	„	13	16	14	15	10	19	17
„ 76	„	8	12	16	12	10	16	19
„ 77	„	14	11	11	15	15	25	16
„ 78	„	9	10	13	12	11	19	15
„ 79	„	9	13	11	5	11	11	12
„ 80	„	6	8	16	13	6	10	16
„ 81	„	8	9	10	9	9	17	10
„ 82	„	11	6	12	11	13	8	8
„ 83	„	11	6	11	15	9	13	11
„ 84	„	7	7	9	9	4	10	14
„ 85	„	12	3	11	6	6	5	10
„ 86	„	6	11	9	6	3	6	8
„ 87	„	2	1	11	1	7	5	6
„ 88	„	2	0	4	4	4	9	1
„ 89	„	2	4	2	3	0	5	5
„ 90	„	3	4	1	3	3	3	5
„ 91	„	0	1	2	1	2	1	1
„ 92	„	0	1	0	1	0	3	4
„ 93	„	0	1	0	0	2	1	1
„ 94	„	0	1	5	1	0	1	1
„ 95	„	0	0	0	1	3	0	0
„ 96	„	0	0	0	11	0	0	1
„ 97	„	0	1	0	0	1	1	1
„ 98	„	0	0	1	0	0	0	1
„ 99	„	0	0	0	0	0	0	0
„ 100	„	0	1	0	0	0	0	0

181 193 237 224 197 273 279

The following table gives particulars of population, births and deaths, etc., for the past twelve years for the whole district:—

(No. 1 Table. L.G.B.)

Year.	Population estimated to Middle of each Year	Births		Total deaths register'd in the District				Deaths of Non-Residents registered in the District	Net Deaths at all ages belonging to District				
				Under 1 year of age	At all Ages	No.	Rate per 1000 Births Registered		No.	Rate*			
		1	2	3	4	5	6	7	8	9	10	11	12
1900	60104	724	12.4	89	122.9	692	11.5	98	189	503	8.3		
1901	59625	1127	18.9	107	94.9	701	11.6	85	183	372	7.91		
1902	61628	992	16.11	120	120.9	759	12.31	78	206	553	8.97		
1903	63000	1111	17.6	95	85.5	750	11.92	90	196	554	8.79		
1904	64000	1101	17.2	125	111.7	782	13.62	134	260	612	9.56		
1905	66000	1110	16.3	92	82.8	836	12.66	115	227	609	9.23		
1906	67700	1197	17.68	145	121.1	971	14.34	143	191	780	11.52		
1907	73441	1206	16.52	94	77.94	827	11.32	121	208	619	8.48		
1908	76527	1120	14.73	106	94.64	934	12.19	139	206	728	9.51		
1909	79288	1203	15.17	110	91.43	909	11.46	131	181	728	9.18		
Average for Years 1900-1909	67131	1089	16.26	108	100.38	816	12.29	113	204	605	9.10		
1910	81812	1276	15.59	93	72.88	871	10.64	168	183	688	8.40		

\* Rates in columns 4, 8, and 13 calculated per 1,000 of estimated population.

The following table gives causes and ages of all deaths during the year 1910, in the whole County Borough:—

TABLE No. 4 (L.G.B.).

Causes of Death.	Deaths at the subjoined ages:—							Total deaths whether of Residents or Non- Residents in Public Institutions in the district.
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	
Small-pox .	—	—	—	—	—	—	—	—
Measles ...	—	—	—	—	—	—	—	—
Scarlet Fever ...	1	—	1	—	—	—	—	1
Whooping Cough ...	4	3	1	—	—	—	—	—
Diphtheria (including Membranous Croup)	11	2	3	6	—	—	—	10
Croup ...	—	—	—	—	—	—	—	—
Fever { Typhus ...	—	—	—	—	—	—	—	—
Enteric ...	—	—	—	—	—	—	—	—
Other { continued	—	—	—	—	—	—	—	—
Epidemic influenza...	—	—	—	—	—	—	—	—
Cholera ...	—	—	—	—	—	—	—	—
Plague ...	—	—	—	—	—	—	—	—
Diarrhoea...	6	5	1	—	—	—	—	—
Enteritis ...	4	3	1	—	—	—	—	—
Gastritis ...	2	1	—	—	—	—	1	—
Puerperal Fever ...	—	—	—	—	—	—	—	—
Erysipelas ...	2	—	—	—	—	—	—	2
Phthisis (Pulmonary Tuberculosis) ...	112	—	1	3	21	85	2	30
Other tuberculous diseases ...	20	6	5	3	2	4	—	5
Cancer (malignant disease) ...	90	—	1	—	1	53	35	24
Bronchitis ...	52	6	2	1	—	7	36	4
Pneumonia ...	48	8	2	1	3	17	17	5
Pleurisy ...	2	—	—	—	—	2	—	1
Other diseases of Respiratory Organs	—	—	—	—	—	—	—	—
Alcoholism {	9	—	—	—	—	6	3	3
Cirrhosis of Liver }	—	—	—	—	—	—	—	—
Venereal diseases ...	2	1	—	—	—	1	—	—
Premature birth ...	25	25	—	—	—	—	—	1
Diseases & accidents of parturition ...	9	6	—	—	—	3	—	1
Heart disease ...	136	3	1	2	7	47	76	6
Accidents... ...	9	2	—	—	1	5	1	5
Suicides ...	5	—	—	—	—	5	—	2
All other causes ...	322	22	5	12	9	105	169	72
	871	93	24	28	44	341	341	170

## INFANTILE MORTALITY AND DEATHS FROM DIARRHOEA.

It is notable that the deaths recorded from Diarrhoea and Enteritis continue to indicate a very favourable fact in the mortality statistics of this Borough. If you can keep the death rate down in the infant population, you are succeeding in being able to secure for your town a possibility in future ages of preserving or securing some great soul that may live and make the world a better place to live in. That this may be so in regard to the beautiful town of Bournemouth is my earnest wish.

Bournemouth has always been favoured in this direction, and may be favourably compared with other towns in the United Kingdom. Proper and sufficient feeding, a pure water supply, good housing accommodation, avoidance of slums or over-crowding, and a fair prosperity are some of the factors which will contribute to this result.

In the Infantile Mortality table which follows will be found particulars as to the deaths among children under one year of age. There have been fewer deaths recorded of infants below the age of one year during 1910, but low, comparatively speaking (i.e., compared with the rate for the rest of the country), as is our infantile death rate, the loss of young lives—of potential citizens—is truly appalling.

TABLE No. 5 (L.G.B.)

## INFANTILE MORTALITY during the year 1910.

Deaths from stated causes in Weeks and Months under One Year of age.

		Cause of Death.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths Under One year
All Causes	Certified	...	29	8	3	40	6	6	9	3	3	6	4	1	2	2	2	84		
	Uncertified	...	4	...	1	5	...	1	1	1	1	...	...	...	...	...	...	9		
I.	Small-pox	...																		
	Chicken-pox	...																		
	Measles	...																		
Common Infectious Diseases	Scarlet Fever	...																		
	Diphtheria																			
	(including Membranous Croup)	...																		
II.	Whooping Cough	1	...	...	1							1	1	1	1	1	1	1	3	
	Diarrhoea, all forms	...	1	...	1			2	1	1	1	1	1	1	1	1	1	1	6	
Diarrhoeal Diseases	Enteritis, Muco-enteritis											3							3	
	Gastro-enteritis	...																		
	Gastritis,																			
	Gastro-intestinal Catarrh	...																		
III.	Premature Birth	13	...	8	...	16	1	1	1	1	1								19	
	Congenital Defects	4	...	1	...	5	...	1	1	1	1	1	1	1	1	1	1	1	8	
Wasting Diseases	Injury at Birth	4	...	...	4														4	
	Want of Breast-Milk, Starvation	...																		
	Atrophy, Debility, Marasmus	3	...	1	3	7	3	2	2	1	1	1	1	1	1	1	1	1	15	
IV.	Tuberculous Meningitis	...										1	1	1	1	1	1	1	3	
Tuber-culous Diseases	Tuberculous Peritonitis																		1	
	Tabes Mesenterica	...																		
	Other Tuberculous Diseases	...										1							1	
V.	Erysipelas	...																		
	Syphilis	...																	1	
	Rickets	...																	1	
	Meningitis (not tuberculous)	...																		
Other Causes	Convulsions	2	...	...	2			1	1	1	1								3	
	Bronchitis	...						1	1	2	1	2	1	2	1	2	1	1	8	
	Laryngitis	...																		
	Pneumonia	1	...	1	...	2	1	2	1	2	1	1	1	1	1	1	1	1	7	
	Suffocation, overlaying	2	...	1	...	3	...	1	1	1	1	1	1	1	1	1	1	1	4	
	Other Causes	3	...	1	4			1	1	1	1	1	1	1	1	1	1	1	6	
		33	...	8	4	45	6	7	10	4	4	4	6	4	1	2	2	2	98	

## PULMONARY TUBERCULOSIS.

I am pleased to record that there has been a remarkable diminution in the number of deaths attributable to consumption. As in former years, the deaths from this disease have occurred largely among visitors. No less than 35 of the total deaths from Phthisis and other tubercular diseases took place in Public Institutions. The number of deaths from Phthisis during 1910 was 112, which number I consider compares favourably with the 150 deaths from this cause in 1909.

Happily it is becoming more generally recognised that Consumption is a preventible disease, and attention once adequately focussed on this scourge, public opinion will act as a motive power to bring about those measures which are essential if we would rid the land of this insidious and devastating enemy.

## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1908.

Under the Public Health (Tuberculosis) Regulations, 1908, notification is made to the Medical Officer of Health of all cases of Consumption that come under the care of the Board of Guardians. During the year 57 notifications under this order have been received, concerning 42 persons, and visits have been paid by the Health Visitor. Where considered advisable the rooms occupied by the patients have been disinfected and advice given as to precautionary measures deemed desirable.

## CANCER.

The mortality from cancer is rather higher than last year. An analysis of the deaths reveals

the fact that in no less than 64 instances the disease manifested itself in some portion of the alimentary canal.

The following analytical table will serve to demonstrate this fact:—

Portion of the Body affected.			No. of Cases.	Number per cent. of Total Cases.
Bowel	...	...	23	25·5
Breast	...	...	10	11·1
Womb	...	...	11	12·2
Liver	...	...	15	16·6
Oesophagus	...	...	5	5·5
Omentum	...	...	1	1·1
Pancreas	...	...	1	1·1
Tongue	...	...	2	2·2
Jaw and Mouth	...	...	2	2·2
Larynx	...	...	1	1·1
Lip	...	...	1	1·1
Prostate	...	...	2	2·2
Bladder	...	...	2	2·2
Vulva	...	...	1	1·1
Stomach	...	...	13	14·4
<hr/>				—
Total Cases ...			90	

As to the cause of this ever increasing scourge, and if it can be prevented, still remains to the majority an unsolved problem. I have thought a great deal on this matter, and my reflection ever leads me to the recognition of the immutability of the universal law of cause and effect. The pain and penalty of wrong doing to and in the animal world may in some measure explain this unhappy infliction. The dietetic habits of the age, and all the cruelty that is directly and indirectly associated therewith, may afford some explanation of this cause of suffering in humanity.

## SCARLET FEVER.

The number of deaths from Scarlet Fever are remarkably few. During the past year there has been but one death attributed to this cause, and the total of deaths from Scarlet Fever in the preceding 10 years has numbered 9 only.

Scarlet Fever has but little connection with general sanitary conditions, but is directly attributable to personal infection; it occurs almost exclusively amongst the school population. Thanks to the system of early notification, the care of the medical practitioners and the immediate isolation which is insisted upon in this borough, the spread of infection from this disease is strangled ab initio, and it is by these means this infectious disorder is prevented from assuming epidemical proportions.

Our zymotic sickness rate under this category has always been remarkably low; the constant watchfulness and assiduity on the part of the Sanitary Officers in this Borough has contributed in no small degree to this immunity.

## INFECTIOUS DISEASE.

The total number of deaths due to notifiable disease for the past five years was as follows:—

Year	Small Pox	Diph. theria.	Scarlet Fever.	Typhoid.	Puerperal Fever.	Ery.	Total.	Death Rate
1906	0	5	0	2	0	1	8	.11
1907	0	7	1	2	0	1	11	.15
1908	0	11	2	2	1	0	16	.22
1909	0	9	3	0	1	4	17	.21
1910	0	11	1	0	0	2	14	.17

The deaths from notifiable disease remain very low and testify to the general healthiness of the Borough.

The following table will shew the number of cases notified and treated in the Sanitary Hospital during the year, classified according to ages :—

TABLE No. 3 (L.G.B.).

Notifiable Disease.	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	Total cases removed to Hospital.
Small-pox	...	—	—	—	—	—	—	—
Cholera	...	—	—	—	—	—	—	—
Diphtheria and Membranous Croup	...	95	2	24	57	5	6	1 89
Erysipelas	...	24	1	—	2	—	14	7 1
Scarlet Fever	...	223	—	47	151	14	11	— 196
Typhus Fever	—	—	—	—	—	—	—	—
Enteric Fever	1	—	—	—	—	—	1	— 1
Continued Fever	—	—	—	—	—	—	—	—
Puerperal Fever	2	—	—	—	—	—	2	— 1
Plague	...	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Totals	...	345	3	71	210	19	34	8 288

The following table indicates the notified cases nursed at home or treated in the Isolation Hospital, and the number of deaths :—

Disease	At all Ages.	Removed to Sanitary Hospital.	Nursed at Home	Total Deaths.	Died in Hospital.	Died at Home.
Small-pox	...	—	—	—	—	—
Cholera	...	—	—	—	—	—
Diphtheria	...	95	89	6	11	11
Membranous Croup	—	—	—	—	—	—
Erysipelas	...	24	1	23	2	— 2
Scarlet Fever	...	223	196	27	1	1
Enteric Fever	...	1	1	—	—	—
Relapsing Fever	...	—	—	—	—	—
Continued Fever	...	—	—	—	—	—
Puerperal Fever	...	2	1	1	—	—
Plague	...	—	—	—	—	—
	—	—	—	—	—	—
Totals	...	345	288	57	14	12 2
Other Cases ..	...	34	34			

### SANITARY HOSPITAL.

During the past year 322 patients have been admitted into the Sanitary Hospital; 12 of these died, giving a case mortality of 3.7 per cent.

The following table is a summary of the patients and diseases treated in the Hospital since its establishment in 1886; and in the succeeding tables is shown the cost of patients and staff during the past five years, and also a statement of stock and loans relating to the land and buildings connected with the Hospital:—

Table showing Number of Cases Treated in the Sanitary Hospital since its establishment in 1886.

Year	Estimated Population	Scarlet Fever.	Diphtheria	Typhoid	Variola	Other Cases	No. of cases in Quarantine Cottages, &c.	Total of all cases received in Hospital	Giving Rate a per cent of all cases admitted.	Death Rate per cent of all cases.	Remarks		
1886	27,000	21	1			15	8	1 Variola	45	2.22	Hospital established this year. One Pavilion and Administrative Block, and a "Lyons" Steam Disinfector.		
1887	32,025	19	4	1			11	1 Typhoid	35	2.85			
1888	33,025	9	5	1			12	1 Diph.	27	3.70	Quarantine Cottages Purchased.		
1889	36,376	10	2	1			8		21				
1890	37,320	8	7	1			6	1 Typhoid	17	5.88	Notification of Infectious Diseases Act adopted.		
1891	37,681 Census Yr.	85	6	5			6	1 S.F. 1 Typ. 1 Diph.	52	5.77			
1892	40,000	76	10	4			9	1 Diph. 1 S.F.	99	2.02	Bournemouth Improvement Act passed. Iron Pavilion erected (8 beds).		
1893	42,000	257	5	5			4	13	19	3 S.F. 1 Var. 1 Diph.	284	1.76	
1894	42,000	106	8	3			14	13	22	1 Variola 1 Diph.	144	1.38	
1895	47,000	92	15	5			6	10	4 S.F. 3 Diph.	118	5.93	Variola outbreak in the Springbourne Ward. Three of these 14 cases lived outside the Borough, but were caused by cases in our District.	
1896	50,000	89	23	8			1	17	6	2 Diph. 1 Typ. 1 S.F. 1 Brain	137	3.65	New Pavilion opened, giving additional 26 beds.

1897	53,008	104	27	6	13	15 S.F. 2 Diph.	150	4.9	New Oak floors provided to old block, with additional bath and improved system of heating.
1898	55,000	78	22	7	16	1 Pneumon. 1 Dip. impd.	123	1.75	Berthon Huts re-painted.
1899	58,480	271	77	4	12	11 Deaths (see report)	964	2.8	In addition, 41 cases were treated in the Hospital admitted from Urban District of Pokesdown (36 S. F. and 5 Diph.)
1900	60,104	115	68	1	7	7 Deaths	181	3.8	In addition, 23 cases were admitted from the Urban District of Pokesdown (11 S. F., 11 Diph., and 1 Enteric).
1901	59,625 Census Yr.	75	64	16	1	6 Dip. 3 En. 1 Variola	167	6.5	Including cases from added Districts.
1902	61,628	61	72	9	1	96      9	187	4.6	Ditto. Old Pavilion painted.
1903	63,000	122	70	7	21	4 Diph.	220	1.8	New Observation Wards being erected, also large additions to administration block. 10 cases of Diph and 1 S. F. were admitted from District of Mudeford.
1904	64,000	95	85	12	27	6 Dip. 1 S.F. 1 Ery. 3 Pneu. 1 Phth.	220	5.4	Observation Wards completed and used. Administrative block alterations completed, grounds re-modelled and altered.
1905	66,000	83	110	8	45	15	248	5.7	13 cases admitted from the Districts of Poole, Christchurch Branksome, Hordle and Canford.
1906	67,700	78	100	9	50	8	237	3.4	Several cases were admitted from outside the District.
1907	73,000	90	79	12	25	7	206	3.3	9 cases were admitted from outside the District.
1908	76,527	85	102	2	36	4	229	6.5	12 cases were admitted from outside the District.
1909	79,288	213	110	8	2	11	333	3.2	9 cases were admitted from outside the District.
1910	81,812	196	89	1	95	12	322	8.7	5 cases were admitted from outside the District.

Sanitary Hospital Expenditure, &c., for the years 1905, 1906, 1907, 1908, 1909.  
No. 2.

Comparative Statement for 6 Years.

YEAR.	Average number of persons, inclusive of Staff in Hospital per day.	Total Average cost per person per day, which includes all administrative expenses.	Average cost per person per day for provisions alone, including stimulants.	Maintenance charges.	Income for the year.	Total Expenditure for the year, after deducting receipts from patients.	Total of all cases received into Hospital.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1906	39·57	0 3 6½	0 0 10½	259 12 11	2224 15 10	237	
1907	40·34	0 3 9½	0 0 11	447 2 2	2550 3 1	206	
1908	39·87	0 3 5½	0 0 10½	369 0 1	2170 14 6	229	
1909	55·97	0 2 10½	0 0 8½	578 19 7	2369 16 8	333	
1910	55·84	0 3 0½	0 0 10	504 18 10	2719 16 7	322	

## No. 4.

**Statement of Stock and Loans relating to Land and Buildings in connection  
with the Sanitary Hospital, 31st March, 1910.**

Amount originally sanctioned	Amount originally borrowed			Amount unredeemed at commencement of the year	Amount redeemed or transferred during the year	Amount outstanding at the end of the year	Amount in redemption or sinking fund	Net debt	To whom owing
	Stock	Loans	£ s. d.						
1400 0 0	1395 6 8		£ s. d.	769 14 9		769 14 9	87 0 11	682 13 10	Stockholder
2717 8 0	2708 12 7			1466 14 4		1466 14 4	168 19 5	1297 14 11	
610 13 8	608 9 0			290 9 3		290 9 3	37 19 0	252 10 3	
1100 11 0	1097 0 1			623 9 1		623 9 1	68 8 11	555 0 2	"
4116 0 0	4004 9 9			2502 5 1	100 0 0	2462 5 1	193 16 11	2208 8 2	"
624 0 6	607 2 7			396 0 3		396 0 3	44 5 1	351 15 2	"
160 0 0	160 0 0			124 0 5	2 9 9	121 10 8		121 10 8	
3800 0 0				3144 16 8	44 16 8	3100 0 0	84 10 11	3015 9 1	Ancient Order of Foresters Society
475 0 0				409 10 0	16 7 6	393 2 6		393 2 6	National Provincial Bank of England, & E.C., E.S., & A.S. Wills
15003 12 8	10421 0 8	4435 0 0				9563 5 11	685 1 2	8878 4 9	
									£14856 0 8

## WATER SUPPLY.

Close and continuous supervision of the water supply has been kept by means of frequent bacteriological and analytical investigation.

The following analyses of samples of the water taken in January and September respectively, indicate the potability and generally satisfactory character of the supply:—

### A

#### GENERAL CHARACTERISTICS.

The sample was clear and free from smell.

#### ANALYTICAL DATA.

Chemical	Parts per 100,000	Chemical	Parts per 100,000
Suspended Matter	...	Nitrogen as Nitrites	None
Dissolved Solids	25.3	Nitrogen as Nitrates	0.103
Chlorine	2.8	Oxygen absorbed from	
Alkalinity	16.0	Permanganate at 80° F :	
Permanent Hardness	2.0	(a) 15 minutes	...
Free and Saline Ammonia	0.0005	(b) 4 hours	0.031
Albumenoid Ammonia	0.006	Lead	None
Total Hardness 12=8.4 grains per gallon.			

#### BACTERIOLOGICAL.

The number of Micro-organisms which grew at 37° c. was 2 from 1 c.c.

The number of Micro-organisms which grew at 22° c. was 26 from 1 c.c.

Bacillus Coli could not be found at all in the sample of water, i.e., 250 c.c.

This water is very satisfactory from a Bacteriological and from a Chemical point of view.

### B

#### GENERAL CHARACTERISTICS.

The sample was clear and free from smell.

#### ANALYTICAL DATA.

Chemical	Parts per 100,000	Chemical	Parts per 100,000
Suspended Matter	...	Nitrogen as Nitrites	...
Dissolved Solids	25.2	Nitrogen as Nitrates	0.10
Chlorine	2.3	Oxygen absorbed from	
Alkalinity	12.5	Permanganate at 80° F :	
Permanent Hardness	3.5	(a) 15 minutes	...
Free and Saline Ammonia	trace	(b) 4 hours	0.053
Albumenoid Ammonia	0.0065	Lead	none
Total Hardness 13.8=9.7 grains per gallon.			

## BACTERIOLOGICAL.

The water was found to contain 1 organism per cubic centimetre capable of growth at 37° C., and 3 organisms per cubic centimetre capable of growth at 22° C. The sample was found to be free from organisms of the *Bacillus Coli* class. This sample is very satisfactory, both from a Bacteriological and a Chemical standpoint.

## FACTORIES AND WORKSHOPS ACTS, 1901.

The following is a report on the working of the above Act. For further details see the Sanitary Inspector's Report which is herewith appended.

**Factories, Workshops, Laundries, Workplaces and Homework.**

1—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.  
Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories (including Factory Laundries)	102	4	—
Workshops (including Workshop Laundries)	1943	102	—
Workplaces (other than Outworkers' premises included in Part 3 of this report) ...	75	6	—
Total ...	2120	112	—

## 2—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Nuisances under the Public Health Acts :—	No. of Defects.	Found.	Remedied.	Referred to H.M. Inspector.	No. of Prosecutions.
Want of cleanliness ...	42	42	42	—	—
Want of ventilation ...	7	7	7	—	—
Overcrowding ...	2	2	2	—	—
Want of drainage of floors ...	1	1	1	—	—
Other nuisances ...	7	7	7	—	—
*Sanitary accommodation :					
Insufficient ...	4	4	4	—	—
Unsuitable or defective ...	36	36	36	—	—
Not separate for sexes ...	3	3	3	—	—
Offences under the Factory and Workshop Act :—					
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—	—
Breach of special sanitary requirements for bakehouses (ss. 97 to 100) ...	31	31	—	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report) ...	—	—	—	—	—
	133	133	—	—	—

\* Standard of the Sanitary Accommodation Order of Feb. 4, 1903, is enforced. Section 22 of Public Health Acts Amendment Act, 1890, has been adopted by the Council.

3.—HOMEWORK.

NATURE OF WORK	OUTWORKERS' LISTS, SECTION 107.				OUTWORK IN UNWHOLESALE PREMISES, SECTION 108.				OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.			
	LISTS RECEIVED FROM EMPLOYERS				ADDRESSES OF OUTWORKERS				PROSECUTIONS.			
	Sending Twice in Year	Sending Once in Year	Outworkers	Outworkers	Received from other Councils	Forwarded to other Councils	Notices served on Occupiers as to keeping or sending lists.	Failing to keep or permit in to send lists.	In instances served.	Notice instances served.	Prosecutions.	Orders made (S. 110).
	Lists (2)	Outworkers Con-tract'rs (3)	Work-men. (4)	Lists (5)	Outworkers Con-tract'rs (6)	Work-men. (7)	Received from other Councils (8)	Forwarded to other Councils (9)	In instances served. (10)	Notice instances served. (11)	Prosecutions. (12)	Orders made (S. 110). (13)
(1)												
Wearing Apparel—												
(1) making, &c.	70	7	273	8	—	15	4	32	—	6	2	—
(2) cleaning and washing	—	—	—	—	—	—	—	—	—	—	—	—
Lace, lace curtains and nets...	—	—	—	—	—	—	—	—	—	—	—	—
Artificial flowers ...	—	—	—	—	—	—	—	—	—	—	—	—
Nets, other than wire nets ...	—	—	—	—	—	—	—	—	—	—	—	—
Tents ...	—	—	—	—	—	—	—	—	—	—	—	—
Sacks ...	—	—	—	—	—	—	—	—	—	—	—	—
Furniture and Upholstery ...	—	2	—	—	—	—	—	—	—	—	—	—
Fur pulling ...	—	—	—	—	—	—	—	—	—	—	—	—
Feather sorting ...	—	—	—	—	—	—	—	—	—	—	—	—
Umbrellas, &c. ...	—	—	—	—	—	—	—	—	—	—	—	—
Carding, &c., of buttons, &c.	—	—	—	—	—	—	—	—	—	—	—	—
Paper bags and boxes ...	—	—	—	—	—	—	—	—	—	—	—	—
Basket making ...	—	—	—	—	—	—	—	—	—	—	—	—
Brush making ...	—	—	—	—	—	—	—	—	—	—	—	—
Racquet and tennis balls	—	—	—	—	—	—	—	—	—	—	—	—
Stuffed toys ...	—	—	—	—	—	—	—	—	—	—	—	—
File making ...	—	—	—	—	—	—	—	—	—	—	—	—
Electro-plate ...	—	—	—	—	—	—	—	—	—	—	—	—
Cables and chains ...	—	—	—	—	—	—	—	—	—	—	—	—
Anchors and grapnels ...	—	—	—	—	—	—	—	—	—	—	—	—
Cart gear ...	—	—	—	—	—	—	—	—	—	—	—	—
Locks, latches and keys ...	—	—	—	—	—	—	—	—	—	—	—	—
Pea picking ...	—	—	—	—	—	—	—	—	—	—	—	—
<b>TOTAL</b> ...	... 72	... 7	... 280	... 9	—	17	4	32	7	6	6	2

## 4—REGISTERED WORKSHOPS.

	Workshops on the Register (s. 131) at the end of the year.	Number.
Bakehouses	...	75
Dressmakers and Milliners	...	160
Tailors	...	89
Bootmakers and Saddlers	...	67
Laundries	...	91
Carpenters and Builders	...	56
Cabinet Makers and Upholsterers	...	31
Coachbuilders	...	15
Watchmakers, &c.	...	11
Metal Workers, Smiths, &c.	...	98
Cycle and Motor Works	...	28
Kitchens of Restaurants, &c.	...	33
Miscellaneous	...	55
		—
		749

## 5—OTHER MATTERS.

*Matters Notified to H.M. Inspector of Factories :—*

Failure to affix Abstract of the Factory and Workshops Act (s. 133)	...	...	...	...	...	38
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)—						
Notified by H.M. Inspector	...	...	...	...	...	7
Reports (of action taken) sent to H.M. Inspector	...	...	...	...	...	7
Other Notice re Fixing of Machinery in Premises	...	...	...	...	...	1

*Underground Bakehouses (s. 101) :—*

Certificates granted during the year	...	...	...	...	...	0
In use at the end of the year	...	...	...	...	...	5

### SEWER WORKS AND STREET IMPROVEMENTS.

The following is a list of the roads that have been sewered during the past year:—

#### UNDER THE PRIVATE STREET WORKS ACT, 1892.

Easter Road	Winton.
Wynyard Road	,,

#### SEWERS CONSTRUCTED BY PRIVATE OWNERS.

Woodford Road	.
Road off Shelbourne Road	.
Iris Road	.

New Road Northwood Estate	
Roads Nos. 2, 6, 7, Charminster Avenue	
Estate	
Malvern Road extension	
East Avenue (portion) Talbot Woods Estate	
Dunbar Road	,
Berwick Road	,
Stirling Road (continued)	,
Berkeley Road (continued)	,

Surface water drains constructed by the Corporation.

PRIVATE STREET WORKS ACT, 1892.

Bryanstone Road

Surface water drains constructed by the Corporation.

From Boundary Road to Red Hill Common  
From Maxwell Road to Queen's Park  
Alum Chine.

I have now come to the end of what I must refer to as my last Annual Report concerning the health of the County Borough of Bournemouth. I desire to record my thanks to your Council, and to the various officials who have given me valuable support and assistance during the time in which I have held office.

It is with mixed feelings of reluctance and pleasure that I relinquish the office that I have filled during so considerable a part of Bournemouth's life as well as that of my own. Bournemouth and I have been young and have grown old together, and it is only with many pangs that I have been led to wrench myself from my guardianship of the Public Health.

I have the honour to remain,

Your obedient servant,

PHILIP W. G. NUNN.

COUNTY BOROUGH OF BOURNEMOUTH.

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ANNUAL REPORT  
OF THE  
BOROUGH BACTERIOLOGIST

*For the Year Ending 31st December, 1910.*

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TO THE MAYOR AND TOWN COUNCIL,  
BOURNEMOUTH.

Gentlemen—

I herewith beg to submit to you my Annual Report concerning the duties entrusted to me as Bacteriologist for the County Borough of Bournemouth.

During the past twelve months I have made 713 bacteriological and other investigations, which is an increase of 3 as compared with the previous year.

The examinations in question consisted of:—

- 559 swabs re diphtheria, etc.
- 52 milk samples re tuberculosis.
- 52 ditto re he pus, blood, dirt, etc.
- 5 specimens of blood.
- 12 samples of ice creams.
- 33 sundry pathological examinations.

The following table shows how the examinations were distributed throughout the year:—

In January ...	71	examinations were made
February ...	77	,
March ...	67	,
April ...	74	,
May ...	125	,
June ...	67	,
July ...	63	,
August ...	23	,
September	27	,
October ...	41	,
November	46	,
December	32	,
<hr/>		
Total	713	

#### DIPHTHERIA AND THROAT DISORDERS OF A DOUBTFUL NATURE, ETC.

Owing to a decrease in the number of diphtheria patients, the bacteriological examinations required by the Diphtheria Wards at the Sanitary Hospital have been less than the previous year.

This diminution of swab examinations is not due to administrative alterations, for all the changes made have tended to increase rather than diminish the amount of bacteriological work. As an example, it may be mentioned that Diphtheria patients are not now discharged until the Reports of three consecutive swab examinations show negative results, whereas, until recently, two negatives were considered sufficient.

The reason that the *total* number of swab examinations remain about the same as last year, although the Diphtheria patients show a diminu-

tion, is because the Medical Officers have deemed it advisable to submit a considerable proportion of the Scarlet Fever patients to bacteriological tests. In this department many interesting and important facts have been revealed, relating to mixed infections and the precise nature of ear and nasal discharges.

The number of bacteriological examinations required by each patient varies very much, according to circumstances. In some cases the persistence of germs, after all signs and symptoms of disease have disappeared, is remarkable. Examinations have frequently to be repeated week after week, and sometimes month after month, before patients can be certified as free from infectious germs: and, of course, it is essential that they should be free before they are discharged from Hospital.

The following Table shows the number of bacteriological examinations required by each patient for the year 1910.

#### SANITARY HOSPITAL.

69	patients required	1	examination.
34	,	2	,
40	,	3	,
23	,	4	,
14	,	5	,
6	,	6	,
4	,	7	,
3	,	8	,
1	,	9	,
3	,	10	,
1	,	13	,

#### MILK.

During the past twelve months 52 samples of milk have been examined for evidence of Tubercu-

losis, and a similar number of samples with special reference to other products of disease, cleanliness, etc.

It is very satisfactory to be able again to state that no Tubercl bacilli were found in any of the samples of milk supplied to Bournemouth. It also affords me great pleasure to be able to say that there has been a decided improvement in the quality of the milk, especially as regards pus, dirt and other undesirable impurities.

It is common knowledge that the hygienic condition of milk as retailed throughout the Country is very bad. Perfectly clean milk is not easily obtained, polluted and dirty milk is exceedingly prevalent.

For years past you have been carrying on a campaign in Bournemouth, with the object of correcting many of the shortcomings responsible for the prevalence of tainted milk. But until recently no very decided or permanent benefit was noticeable.

During 1910, however, there was a marked change for the better; the result being that, for the year, there was an increase of 14 per cent. of "very good" milks and a general all-round improvement.

This evidence of progress bears striking testimony to the value of the methods adopted in Bournemouth for the supervision of Milk.

### TYPHOID FEVER.

For the whole year, only five examinations for Typhoid Fever were required. This is a very small number in proportion to the population of the Borough.

Considering (1) the constant influx of visitors to Bournemouth, (2) the numerous Institutions

situated in our midst, and (3) many other possible agencies for the introduction and transmission of disease—it would not be surprising if the number of examinations for Typhoid Fever considerably exceeded the modest figure quoted above.

### ICE-CREAMS.

There has been some improvement in the Ice-creams sampled this year, as compared with other years; but the condition of things in connection with the manufacture of Ice-creams, is far from satisfactory. Gross bacterial impurity is very prevalent, and seems likely to continue under the present legislation.

Of the 12 Samples taken by the Inspector of Food and Drugs, 6 were "good," 2 "moderately bad" and 4 "decidedly bad."

Few articles used as Food can compare with Ices in the way of containing so many millions of putrefactive and other bacteria: and although the microbial pollution is easily reduced to a minimum by simple measures, great difficulty is experienced in getting those measures methodically carried out.

In giving this summary of the bacteriological work for the year, I have left several interesting and debatable topics to be dealt with by the Medical Officer of Health in his Report—as the matters referred to can be more adequately discussed in conjunction with practical medicine.

In conclusion, I wish to acknowledge my indebtedness to the Medical Officer of Health for his kind advice and co-operation on many occasions.

I remain, Gentlemen,

Your obedient servant,

F. J. TANNER,

Borough Bacteriologist.

## COUNTY BOROUGH OF BOURNEMOUTH.

SANITARY INSPECTORS' DEPARTMENT,

MARCH, 1911.

TO THE MAYOR AND TOWN COUNCIL,  
COUNTY BOROUGH OF BOURNEMOUTH.

MR. MAYOR AND GENTLEMEN,—

I have the honour to submit for your consideration the Annual Report of work carried out by this Department for the year 1910.

The administrative work of the Department has again been re-organised this year to meet special circumstances.

In April last the four District Sanitary Inspectors were deputed to carry out special duties for the general inspection of food supplies in shops, hawkers' barrows, etc., and a special Enquiry Officer was appointed for the purpose of enquiring and reporting as to infectious cases and for the disinfection of premises where notifiable and non-notifiable diseases have occurred.

It was thought that the District Inspectors being relieved of these enquiry duties would be able to devote more time to the general inspections of their several districts, and that the Disinfecter at the Hospital being relieved of outside duties of disinfection, would be able to give the additional assistance required at the Hospital.

This arrangement was found to have advantages, but it has lead to a certain amount of overlapping in the district work.

The arrangement which your Committee have recently made for dividing the Borough into five districts and appointing an additional Inspector, so that each Inspector is now responsible for all duties in his district is more satisfactory from an administrative point of view, will secure more efficient supervision of the district, and prevent overlapping, which is neither satisfactory to the general public nor the Official.

The question of house-to-house inspection has been before your Committee several times during the year, and a special report was made in March last.

The arrangements made by your Authority some years ago, by which the Buildings Department and Sanitary Department should work conjointly in the construction and testing of all drainage, both in new and old houses, and also the additional powers now obtained for dealing with the drains of old houses where new building additions are made, have and will gradually effect an improvement in the older properties.

In the Winton district, Richmond Park district, and Pokesdown, a complete house-to-house inspection has been made before the houses have been allowed to be connected to the sewers.

Moreover, in all cases where infectious disease arises, and private inspections are made for the Formal or Informal Certificates, a complete inspection and testing of drainage and sanitary arrangements are made.

Apart from the question of drainage inspection and testing there are many other matters of equal

importance affecting the health and sanitation of the Borough, and the results of the periodical and systematic general inspection of shops and premises which was recently advocated, shews the necessity of more frequent inspections being made for the detection of surface nuisances, apart from drains and sanitary fittings.

Your Authority will therefore see that not only is a large amount of time and attention given to the ordinary routine work as to house drainage, but there is also a general sanitary supervision of the Borough as a whole.

This latter work, has also shewn definitely there are three questions which will require the careful consideration of your Authority in the near future, viz.:—

- (1) Cleanliness, paving and drainage of back yards, and the keeping of poultry and animals, particularly in the smaller properties.
- (2) Temporary storage of house refuse.
- (3) Periodical inspection of boarding and lodging-houses as to storage of food supplies, cleanliness of offices, and sleeping accommodation for servants.

Action has been taken as directed during the year dealing with the question of the house fly and for extermination of rats where complaints have been received.

A special report as to the latter was made to your Authority, and after careful enquiries and inspections made it was found that in the majority of cases the pests of rats as complained of, arose either from the keeping of poultry or the

insufficient or unsuitable ashpit or ashbin accommodation for the temporary storage of waste food and house refuse.

The rat, being by nature a scavenger, such storage of wastes induces it to make its abode in the town near the dwellings, particularly during the winter months when food is scarce in the open fields and country.

Your Authority instructed that public notice should be given as to the precautions which should be taken in the keeping of poultry and temporary storage of waste food and refuse.

Reports have been made to your Authority as to the employment of children, female domestic servants' registries, fire escapes for workrooms and factories under and above the ground floor, and Bye-laws for regulating same have been considered and adopted in each case.

A special report has been made as to the vacant plots of land in the Borough being temporarily acquired by your Authority with the view of utilising such open spaces as a playground for young children.

A doubly useful purpose would be secured. These sites would be under proper control, and it would be an incalculable benefit for young children to have such open playgrounds in preference to their being compelled to play in the streets, as they do at present, in the more congested neighbourhoods.

Your Committee favourably considered this question and the matter is not being lost sight of.

The supervision of the ambulances for street accidents has been handed over to this Department and arrangements made for the regular inspection of same.

The arrangements made for the cleansing of the hotel conveniences, back roads and rights of ways recommended by your Committee last year have been maintained and the system of making up and taking over of the latter under the Private Street Works Act is being gradually proceeded with as occasion requires.

#### FACTORY AND WORKSHOP ACT, 1901-1907.

The total number of workshops and work-places now registered in the Borough is 749, an increase of 7 on last year.

During the year 89 new workshops have been registered, 96 work rooms have been measured, and cards, *re* cubic space, etc., have been supplied to the occupiers.

All the premises registered have been inspected during the year; these inspections have been made systematically, and as occasion has required, with the view of detecting any nuisance arising from overcrowding, insufficient ventilation, defective sanitation, uncleanliness, and generally to enforce the special requirements of the Acts.

In all cases where nuisances have been found to exist, notice has been given to the owner or occupier of the premises to remedy the defects, and it is very satisfactory to be able to report that in every case the nuisance has been abated without legal action.

It is also satisfactory to note the continued improvement in the general sanitary conditions of the workrooms, especially in those occupied by tailors, dressmakers, and milliners.

The rooms are not only kept cleaner and tidier, but more attention is given to the ventilation; the

open window is becoming the rule instead of, as in the past, the exception.

During the year 2,120 inspections have been made, and 112 notices have been served.

In one workshop, in which more than 40 hands were employed, structural alterations were carried out under advice of the Captain of the Fire Brigade and your Inspector, in order to provide additional means of escape in case of fire.

The question of framing Bye-laws for the more efficient provision of Fire Escape in case of workshop and workplaces situate on and above the first storey of premises is receiving the attention of your Sanitary Committee.

The following is the list of workshops on the register at the end of the year, classified according to trade, and showing the number of rooms occupied:—

Trade.	Premises Registered.	Rooms Occupied.
Bakehouses ...	... 75	79
Dressmakers and Milliners ...	160	255
Tailors ...	... 89	121
Bootmakers and Saddlers ...	67	71
Laundries ...	... 91	207
Carpenters and Builders ...	56	81
Cabinet-makers and Upholsterers	31	49
Coachbuilders ...	... 15	37
Watchmakers, etc. ...	11	16
Kitchens of Restaurants, etc.	33	33
Metal Workers, etc. ...	38	41
Cycle-builders and Motor Works	28	34
Miscellaneous ...	55	65
Total ...	749	1,089

## BAKEHOUSES.

Of the 75 bakehouses occupied in the Borough five are occupied as underground bakehouses and the remainder are on, or above, the ground level.

All the underground bakehouses are certified by your Authority to be suitable as regards light, ventilation, construction, etc., to be used as bakehouses.

In two bakehouses structural alterations have been carried out, and the work supervised by this Department.

Two underground bakehouses have been closed during the year.

The whole of the bakehouses in the Borough have been cleansed or limewashed twice during the year, in accordance with the requirements of the Act.

## KITCHENS OF RESTAURANTS, Etc.

These premises have been regularly inspected during the year, and in six instances it was found necessary to serve notices requiring the abatement of nuisances.

In making these inspections special attention has been given to the cleanliness of the larders, tables, and cooking utensils, and these have been found to be very satisfactory.

## HOMEWORK.

During the year 81 lists containing the addresses of 297 "Outworkers" have been received.

Thirty-two of these addresses were outside of the Borough, and the usual particulars were sent

to the Authorities of the district in which the work was done.

Four addresses were received from outside Authorities.

Two hundred and thirty-eight visits were made to outworkers' premises, and in only six instances was it found necessary to serve notices for the cleansing of the premises, and in three cases for the abatement of a nuisance arising from defective w.c.'s.

Seven employers of outworkers failed to send in their List of Outworkers at the specified time, and three firms were found employing outworkers without keeping the prescribed Form of Register.

In each case a letter of warning was sent, under your Authority, and the requirements were subsequently complied with.

Two cases of infectious disease occurred in outworkers' premises.

Each case was immediately removed to the Sanitary Hospital, and the workrooms, clothing, and articles in process of being made were subjected to the usual disinfection by your Disinfecter.

#### SHOP HOURS ACT, 1892-1895.

The object of this Act is to prevent the employment of "young persons" (under the age of 18 years) for more than 74 hours, including meal hours, in one week.

During the year 125 visits have been made to shops in the Borough under this Act, and it is satisfactory to note that in no case has a "young person" been found to be employed more than the specified number of hours.

In 24 instances young persons were found to be employed in shops in which the notice, as required by Section 4 of the Act, was not exhibited.

Notices were delivered to each of these premises, and the occupiers were warned by letter.

#### SEATS FOR SHOPS ASSISTANTS ACT.

When making inspections under the Shop Hours Act enquiries were also made as to the provision of seats for the female assistants.

Twelve special visits were made to shops in which female assistants were employed, and only one shop was found without a sufficient number of seats.

A letter of warning was sent, and the Employer was requested to provide additional seats.

This request was subsequently complied with.

No complaints have been received this year as to any contravention of this Act.

#### EMPLOYMENT OF CHILDREN ACT, 1903.

On 51 occasions inspections have been made of the Borough after 9 p.m. for the purpose of detecting any offence against the provisions of this Act.

Twenty-six children were found employed in contravention of the Act.

In each case letters of warning have been sent either to the parent or employer, sometimes to both, but in no case has your Committee considered it necessary to take legal proceedings.

Special visits were also made to the hair-dressers' premises during the year, but in no case were children found employed after the legal time.

During the year two copies of licenses granted under the Prevention of Cruelty to Children Act, 1904, for children to take part in public entertainments, have been received, and on each occasion the place of entertainment was visited and the conditions of the license enforced.

### REGISTRIES FOR FEMALE DOMESTIC SERVANTS.

The number of these premises on the Register at the end of the year was 27, the same as at the end of 1909.

During the year sixteen Registry Office keepers gave up business, and sixteen others were registered.

One hundred and sixty-three visits have been made to the premises for the purpose of ascertaining whether the provisions of the Bye-laws relating to these premises were complied with.

Great difficulty has been experienced in enforcing the clauses of the Bye-laws which require that all Registry Office keepers shall keep specified books and issue to all applicants for registration printed forms, on which to fill in certain particulars.

On no less than seventy-six occasions contraventions of the Bye-laws have been detected.

Thirty-seven notices have been sent to Registry Office keepers, requiring them to comply with the Bye-laws, and in several cases it was only after repeated visits had been made to the premises where the business was carried on, that the notices were complied with.

During April it was found necessary to report thirteen keepers to the Sanitary Committee, and it was resolved that a strong letter of warning be sent

to each of the offenders. This was done, and on subsequent inspections being made, it was found that the letters had the desired effect.

### FRIED FISH SHOPS.

There are now ten of these shops in the Borough, and from time to time inspections have been made as to the cleanliness of premises, soundness of fish supplies and ingredients used in the trade.

In three instances structural improvements have been carried out to meet the notices served for storage, cooking, and ventilation.

### SMOKE NUISANCES

During the year six general inspections of the Borough have been made with the view of detecting any nuisance arising from black smoke, and in all instances observations of 60 minutes duration have been made.

In no case has it been found necessary to take formal action, but letters of warning were sent in eight instances.

### DAIRIES, COWSHEDS AND MILK SHOPS

#### ORDERS.

Three hundred and twenty-seven inspections have been made of cowsheds, dairies, and milk purveyors in the Borough, and the regulations relating to cleanliness, limewashing, and general sanitation have been enforced.

Improvements have been carried out in six dairies, and four new premises have been erected;

also 69 registrations and re-registrations have been made during the year for the sale of milk from milk shops.

The half-yearly limewashing of premises has in every instance been carried out after notice given by your Inspector.

There are only five cowsheds in the Borough.

A special inspection was made in the early part of the year of the hand-carts and utensils used in the purveying of milk supplies, and a general improvement has been the result of the notices served and advice given.

A special report was presented to your Committee as to the small general shops at which milk is sold.

In many of these shops articles such as salt fish, meat, loose pickles, paraffin, vegetables, fruit, etc., are sold and must be considered unsuitable for the sale of milk, particularly as is too often the case the shops are overstocked and badly ventilated.

As a rule this class of shop-keepers do not sell the milk so much for the sake of profit as for the supposed convenience of their customers, and as a result of a more stringent inspection and enforcement of regulations many have discontinued the sale and their names have been removed from the register.

Special attention has been paid during the year and precautions taken by the dairymen for the periodical testing of the supplies of milk from the respective farms, by means of the Gerber test, and it will be seen by the returns of the Borough Analyst that the quality of milk is of a high standard in Bournemouth.

In fact it would not be difficult to enforce a 3.5 per cent. milk fat standard here throughout the year.

### SHOP INSPECTION.

During the year 6,352 visits were made to shops in the Borough in respect to cleanliness of premises, stores, etc., and the following articles of food were destroyed as unsound and unfit for human consumption.

	lbs
Meat ... ...	$3,997\frac{1}{2}$
Fish ... ...	224
Hare and Rabbits ...	14
Fruit and Vegetables ...	$1,310\frac{1}{2}$
Number of Chickens ...	5
,,  ,, Turkeys ...	3
,,  ,, Geese ...	1
,,  ,, Rabbits ...	2
,,  ,, Tuberculous Car- cases wholly destroyed ...	3
,,  ,, Eggs ...	50
,,  ,, Bananas ...	66
,,  ,, Cabbages ...	30

The duties relating to shop inspection have been re-organised, and two Inspectors, Messrs. W. Pearce and W. D. Carter, are now engaged in carrying out the duties of Food Inspections, including all the general food shops and stores.

These duties include early morning and late night inspections at premises wherever such are found to be necessary.

The wholesale fruiterers and greengrocers have been interviewed as to the sale of "throw outs" to the hawkers, and I am glad to report that they have given very valuable assistance in the regulating of this trade.

A strict inspection has been systematically made throughout the year of the hawkers' barrows and carts.

### SLAUGHTER-HOUSES.

There are now six slaughter-houses in the Borough, three having been closed during the year, and 401 inspections have been made; and the regulations as to periodical limewashing, etc., enforced.

During the year the slaughter-houses have been re-inspected with a view to bringing them up-to-date and to effect structural improvements.

In three instances the owners have decided not to comply with the notices served, and rather than carry out the improvements required, have decided not to renew their applications for renewal of license.

With the reorganization of the Department it is now possible to arrange for an Inspector to be present at the slaughter-houses on the principal days when the slaughtering takes place, and thus a more thorough and efficient inspection of the carcases can be made.

Early morning and late night inspections of premises where carcases are delivered can also now be carried out, a most important provision particularly as regards the pork trade.

Nearly all the pigs sold in the Borough are killed outside the Borough boundaries, and in many instances are sold to the smaller purveyors early in the mornings.

It is now possible with this new administration for the carcases to be examined before being cut up for sale.

In December last an important step was made by the butchers and meat purveyors in the Borough for safe-guarding diseased meat from being placed on the market.

The trade, in conjunction with the farmers and auctioneers, have decided to organize a system what is known as "Insured Markets," and that in future they will only purchase stock under such conditions.

Most of the butchers who slaughter outside the Borough, but who purvey the meat within the Borough, have also agreed to this proposal.

Under these conditions, where the Inspector finds, or the slaughterman reports, that a carcase is so affected with disease as to be unfit for food the butcher "signs it over" for destruction by your Authority.

A certificate is then given and the whole value or portion as may be agreed upon, is then refunded by the Insurance Fund.

Under these circumstances neither the farmer, auctioneer, nor butcher individually stands to lose the value of the entire carcase, which was formerly the case.

It will also considerably assist in the prevention of diseased meat being placed on the market, and be to the advantage of the general public.

In the case of dispute the trade will appoint a representative to meet your Officials as to the points raised, and, if possible, thus effect an amicable settlement without in the first place appealing to the Courts of Justice.

In the case of Foreign meat which is found to be "bone tainted" or otherwise unfit for food of man the butcher has agreed to notify same to the

Department and the meat will be destroyed by the Inspector and a certificate to this effect will be issued and the value of the carcase can then be obtained by the butcher from the wholesale factor.

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## SUMMARY OF SANITARY OPERATIONS IN EACH DISTRICT.

*For the year ending December 31st, 1910.*

I herewith submit particulars under separate headings detailing the various Sanitary operations carried out by the Department:—

### 1.—NISSANCES.

	District No. 1.	District No. 2.	District No. 3.	District No. 4.	Total.
Complaints received and attended to	117	412	86	135	750
Number of Tests made for detection					
of nuisances	...     ...	44     19	85     55	203	
Visits <i>re</i> abatement of nuisances	903	210	1024	1026	3163
General Inspections of District	...     67	28	46	22	163
Premises inspected	...     526	81	643	191	1441
Number of Nuisances detected	...     143	68	141	103	455
Total number of nuisances abated...	197	56	140	60	453

### 2.—INFECTIOUS DISEASE.

Enquiries for Reports to M.O.H. ...	35	141	46	23	245
Premises tested     ...	33	31	37	106	207
" not tested     ..."	31	94	12	12	149
" with defects ascertained...	39	10	17	64	130
Nuisances detected     ...	38	26	19	67	150
" abated     ..."	46	23	15	33	117
Total No. of Visits     ...	351	221	83	297	955

### 3.—FOOD SUPPLIES P.H.A. 1875, P.H.A.A.A. 1890.

Unsound food destroyed...	...     2	8	10	24	44
Total in lbs. of :—Apples	...     —	9	—	2	11
Pears	...     —	4	—	17	21
Grapes	...     —	2	—	—	2
Tomatoes	...     —	—	—	1185½	1185½

Total in lbs. of :—	Bananas	...	—	—	3	—	3
	Gooseberries	...	—	—	40	—	40
	Green Peas	...	—	24	—	—	24
	Fruit...	...	—	—	—	6	6
	Red Currants	...	—	—	—	4	4
	Hare & Rabbits	...	—	—	—	14	14
	Meat	...	—	31½	—	3966	3997½
	Fish ...	...	—	—	—	224	224
	Broccoli	...	—	—	14	—	14
Total number of :—	Bananas	...	66	—	—	—	66
	Cabbages	...	—	—	30	—	30
	Eggs	...	—	—	50	—	50
	Rabbits	...	2	—	—	—	2
	Fowls	...	—	—	5	—	5
	Turkeys	...	—	—	3	—	3
	Geese	...	—	—	1	—	1
	Carcases	...	1	—	—	2	3

## 4.—GENERAL INSPECTION OF SHOPS, &amp;c.

	District				Totals				
	1 General Complete	2 General Complete	3 General Complete	4 General Complete					
Butchers	654	21	98	15	978	30	643	45	2484
Fishmongers & Poulterers	203	6	58	6	434	12	184	7	910
Greengrocers	371	16	84	9	704	—	376	25	1585
Grocers	73	29	26	13	338	—	7	26	512
Ice Cream Premises	9	—	9	2	26	—	—	—	46
Hawkers' Carts, &c.	180	—	52	1	673	—	41	—	—
Total number of visits to Shops, &c. ...	1497	72	288	38	3263	—	1131	63	6352
No. of cases in which action was taken ...	2	4	10	8	—	24	—	—	—
No. of cases in which notices were served and complied with ...	1	11	10	8	—	30	—	—	—
Special evening inspections	49	21	53	51	—	174	—	—	—

## 5.—COWSHEDS, DAIRIES AND MILKSHOPS.

Quarterly Visits to Cow- sheds ...	10	3	—	—	13
Number requiring atten- tion ...	—	—	—	—	—
Visits to Dairies ...	53	18	40	42	183
Number requiring atten- tion ...	7	7	4	2	20

Visits to Milkshops ...	42	11	47	31	131
Number requiring attention ... ...	—	4	2	5	11
Total visits ... ...	60	39	55	39	193
Number of cases in which notices were complied with ... ...	8	3	6	5	22

## 6.—SLAUGHTERHOUSES.

Weekly visits to slaughterhouses ... ...	74	50	277	401
No. of animals slaughtered	2696	759	10942	14397
Beasts ... ...	138	147	1137	1422
Sheep ... ...	1248	502	7313	9063
Calves ... ...	591	30	410	1031
Pigs ... ...	688	—	2	690
Other Animals ... ...	1	6	500	507
No. of cases in which notices were served ... ...	3	—	5	8
No. of cases in which notices were complied with ... ...	1	6	2	9

## 7.—NEW BUILDINGS.

Water tests ... ...	257	372	184	81	894
Number of re-tests ... ...	19	27	12	17	75
Smoke tests ... ...	229	274	53	56	612
Number of re-tests ... ...	19	4	2	1	26
Total visits ... ...	528	760	181	133	1602
Number of reports made to B. I. re details of defects ascertained ... ...	122	84	9	14	229

## 8.—PRIVATE INSPECTIONS.

Premises Inspected and Tested ... ...	50	22	104	60	236
Subsequent Water Tests ... ...	15	14	42	52	123
,, Smoke ,, ... ...	25	19	52	67	163
Visits re Supervision of Works ... ...	343	52	707	446	1548
Total Visits ... ...	398	116	902	305	1721

## 9.—WINTON DRAINAGE.

Plans deposited, checked and reported on	...	...	72
Drains tested with the water test	...	...	104
Drains tested with the smoke test	...	...	85
Visits (including supervision of works)	...	...	491

## PARTICULARS RE DISINFECTION.

NOTIFIABLE DISEASES.	Totals.
No. of Rooms Disinfected...	... 504
No. of Rooms Stripped and Re-papered	... 26
No. of Rooms Cleansed and Limewashed	... 60
No. of Books Disinfected ...	... 86
No. of Articles Disinfected at Hospital	... 6,161
No. of Wards Disinfected at Hospital	... 105
No. of times Drains flushed at Hospital	... 116
No. of Articles Destroyed...	... 245
Total No. of Visits	... 1,052

NON-NOTIFIABLE DISEASES.	1
No. of Rooms Disinfected after Phthisis	... 70
No. of Articles Disinfected after other non-notifiable Diseases	... 80
No. of Articles Removed	... 528
Total No. of Visits	... 347

## COMMON LODGING-HOUSES.

There are only two registered common lodging-houses in the Borough.

The premises in both instances have been kept in clean and satisfactory condition, and no case infectious disease has been notified.

The general supervision of these premises are under the control of the Police.

## INFECTIOUS DISEASE.

During the year 356 reports, as per undermentioned table, have been made to the Medical Officer of Health as to infectious cases notified.

The drainage and sanitary arrangements of the premises have been examined and tested, and 131 preliminary notices have been served on the owners and occupiers for the abatement of nuisances ascertained.

These notices have in all cases been complied with satisfactorily.

The house drainage and sewers have also been flushed and disinfected where necessary.

In cases nursed at home the District Inspector leaves a pamphlet form of suggestions at the house, giving particulars as to nursing, disinfection, penalties, etc.

## REPORTS OF INFECTIOUS CASES.

		District 1	District 2	District 3	District 4	Totals
Scarlet Fever...	...	40	108	28	52	228
Diphtheria ...	...	27	30	14	28	99
Typhoid Fever	...	—	—	2	—	2
Erysipelas ...	...	7	6	5	7	25
Puerperal Fever	...	2	—	—	—	2
Continued Fever	...	—	—	—	—	—
		—	—	—	—	—
Totals reported	...	76	144	49	87	356
Houses with defects ascertained		39	10	17	64	130

## WINTON AND MOORDOWN DRAINAGE.

The special work of re-draining houses to the sewers in this district has been proceeded with satisfactorily during the past year.

Since the year 1904 when the main outfall was completed 2,801 houses (new and old properties) have been drained and connected up to the sewerage system and 1,499 cesspools have been abolished and filled in.

The following works were executed during the past year:—

100 old houses have been provided with entirely new drains and connected to the public sewer in place of cesspools, pail and privy closets.

245 new houses have been erected in this district and drained to the public sewer.

21 new houses have been erected in the Richmond Park district and drained to the public sewers of Bournemouth. These houses are situate outside the Borough boundary.

366 total.

In September an inspection was made of all the old properties not drained to the public sewers in roads recently sewer'd.

A report was presented to your Authority and Statutory Notices were served as per instructions received.

It is satisfactory to report that all have been drained and connected to the public sewers and it has not been necessary to enforce formal proceedings in any case.

In the same report to your Authority I suggested that the Buildings Committee should be asked to enforce the undertakings given by the owners of the properties when their plans were passed.

The conditions of these undertakings were that the premises should be drained to the sewers as soon as the sewerage scheme was completed.

Your Authority agreed to the suggestion and notices have been served by the Buildings Inspector on owners of the 47 houses reported.

This work is now being proceeded with satisfactorily.

Eleven houses have already been drained and the work is being supervised by this Department.

A new sewer has recently been constructed for the Wynyard Road, in which there are 40 houses (new and old).

Notices are now being prepared and the properties are being dealt with in the usual way.

The following roads still require to be sewered, and the cesspools in these roads are being emptied free of cost by your Authority.

	No. of Houses.
Crichel Road ... ... ...	13
Somerley Road (2nd section) ...	2
Evelyn Road S. , , ...	7
Brassey Road , , ...	4
Oakwood Road, Charminster ...	18
Portland Road (2nd section) ...	3
Victoria Road (private road) ...	9
Balfour Road , , ...	4
	<hr/>
	60

#### MOORDOWN (OLD PART).

It will be necessary for your Authority in the near future to take into consideration the complete sewerage of this district.

There are about 160 old houses in the neighbourhood, some of which have been found to be in a very dilapidated condition.

Only about 12 houses are drained into cess-pools, these are emptied by your Authority free of cost.

The remaining properties have either pail or earth closets and no provision for the disposal of waste water.

### WINTON DISTRICT.

#### CESSPOOL DRAINAGE AT WINTON AND POKESDOWN.

During the past year the following works have been executed in connection with the emptying of cesspools in the above-named districts:—

#### WINTON DISTRICT.

Number of cesspools emptied	...	344
Number of loads of sewage removed		869
Number of cesspools condemned and filled in	...	94

#### POKESDOWN DISTRICT.

Number of cesspools emptied	...	36
Number of loads of sewage removed		84
Number of cesspools condemned and filled in	...	7

The number of cesspools in these districts is gradually being diminished and for about three months of the year it has not been necessary to use the patent exhaust cart for the work of emptying cesspools.

There are at the present time about 150 cess-pools in the Winton district and four cesspools in the Pokesdown district which require frequent attention, not including those in the outlying district of Wick.

The greater portion of the sewage from the cesspools has been carted to Strouden Farm.

*Expenditure.*

	£ s. d.
Three Corporation men at 25s. per week each for 9 months...	135 0 0
Two horses at 10s. per week each (keep only) ... ...	36 0 0
New rubber pipes, etc. ... ...	31 9 0
Painting cart ... ...	5 0 0
Oil and disinfectants ... ...	10 9 0
	<hr/>
	217 18 0

*Income.*

	£ s. d.
Amount received for hire of cart:—	
Winton ... 5 0 0	
Pokesdown ... 4 15 0	
	<hr/>
	9 15 0
	<hr/>
Total cost for working cart for 9 months ... ... ...	208 3 0
	<hr/>

### PIGGERIES.

#### WINTON AND MOORDOWN DISTRICT.

The piggeries have been inspected at various times during the past year.

There are at present 10 piggeries, where 70 pigs are kept.

These piggeries are situated in the rural parts of the district and are kept in conformity with the Borough Bye-Laws.

Since the Incorporation of this district the pig-keeping business has been steadily on the decline.

Most of the large piggeries have been removed to districts outside the Borough boundaries, those that remain are chiefly owned by the artisan class, who keep pigs principally for their own private purposes, and not as a matter of business.

Six piggeries have been removed during the year.

No complaint has been received as to any of the piggeries in the district during the whole year.

#### POKESDOWN DISTRICT.

No. of piggeries ... ... ...	12
No. of pigs kept when last inspection was made ... ... ...	165

Periodical inspections have been made in this district, and the Bye-laws have been enforced as to removal of manure, drainage of floors, styes, etc.

#### PUBLIC MORTUARY.

The Public Mortuary, built at the Central Depôt, was opened on March 28th, 1907.

There are three separate buildings, comprising the Coroner's Court, Mortuary, and Post-Mortem Room, all of which are fitted with the latest and most up-to-date arrangements. The general supervision of the premises is under the control of this Department, and printed Regulations as to the general management have been drawn up by your Sanitary Committee and sent to all the Medical men and Undertakers in the Borough.

From January 1st, 1910, to December 31st, 1910, the total number of Inquests was 45 and Post-Mortems 30.

The total cost as to working expenses for the year 1910, so far as this Department is concerned, is as follows:—

	£ s. d.
Proportion of Attendants' wages for daily cleansing... ...	10 8 0
Attendance at Inquests and P.M.'s ... ... ...	15 0 0
Gas from December 19th, 1909, to December 19th, 1910, includ- ing meter rent and upkeep of burners ... ... ...	19 6
Disinfectants, Soap, Laundry, etc. ... ... ...	8 4
Port-Mortem Gloves ... ...	16 6
	<hr/>
	27 12 4
	<hr/>
Fees received for private use of Mortuary and attendance ...	1 16 0

N.B.—The water supply for the Mortuary, etc., is taken from the main supplying the Central Depôt and is not separately charged.

### PUBLIC CONVENIENCES.

Working expenses of Public Conveniences  
from December, 1909, to December, 1910:—

	£ s. d.
Repairs to conveniences, includ- ing cost of automatic lighting	55 4 9
Wages paid to attendants ...	435 10 7
Gas and water, and hire of meters	119 1 8
Disinfectants, Soap, Brushes, Laundry Work, etc. ...	37 3 10
Painting conveniences ...	16 2 5
Total Receipts... ...	919 10 7
Expenses ... ...	663 3 3
	<hr/>
Balance ...	256 7 4
	<hr/>

## HOTEL CONVENIENCES.

At the Hotels and Public-houses where the conveniences are accessible to the general public your Authority have now made arrangements with the proprietors and owners for the premises to be daily cleansed by the Corporation Lavatory Cleaners at a certain charge. This has secured a thorough supervision and sanitary improvement, and has proved a most satisfactory arrangement to all concerned.

Statement of Receipts from Public Conveniences from December, 1909, to December, 1910.

Convenience.	Nvemb'r Dec'mbr' Jan'y Feb'r March April May June July August September October												Totals												
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.							
Knyveton Gardens	0	0	8	0	0	6	0	1	2	0	0	9	0	2	1	0	5								
Westbourne	..	1	9	11	1	1	6	1	7	8	2	2	0	5	1	0	5								
Poole Hill	..	2	10	1	2	1	1	16	7	2	0	11	1	19	1	4	4								
Triangle	..	1	12	8	1	6	6	1	3	2	1	19	9	2	0	15	2								
Bourne Avenue	..	2	0	10	1	16	2	2	0	7	3	4	3	2	15	10	8								
Westover Road	..	2	15	10	2	6	1	2	0	2	1	5	3	0	11	2	8								
Engine House	..	0	10	2	0	8	4	0	10	11	0	17	2	0	18	4	1								
Pier Approach	..	2	10	3	2	2	4	2	9	0	6	9	5	16	9	6	3								
Ladies' No. 1	..	7	9	5	7	15	10	9	5	9	16	9	8	15	17	13	17								
Ladies' No. 2	..	3	2	2	0	2	13	3	4	7	9	13	16	5	14	7	6								
Lansdowne	..	2	18	0	2	8	6	2	5	6	4	2	3	19	6	4	3								
Horse Shoe	..	1	10	4	1	3	11	1	7	2	1	11	6	1	9	4	1								
Carnarvon Crescent	..	1	18	6	1	14	1	11	0	2	2	6	2	4	2	4	2								
King's Park, Gents'	..	0	7	7	0	3	6	0	4	8	0	7	5	0	7	7	0								
" " Ladies'	..	0	2	0	0	1	8	0	2	2	0	3	1	0	4	1	1								
Boscombe Gardens, Ladies'	..	0	9	9	0	9	7	0	18	10	2	7	3	2	1	2	1								
" " Gents'	..	0	8	4	0	7	1	0	12	10	1	7	2	1	6	1	0								
Boscombe Cliff Gardens	..	0	10	0	0	10	0	1	0	0	1	5	0	1	8	12	2								
" " Lawn Tennis	..	0	7	0	0	7	0	0	10	1	0	14	1	0	12	6	0								
Bournemouth	..	0	3	0	0	3	9	0	6	0	0	11	3	0	17	8	0								
Alum Chine	..	0	18	8	0	15	0	0	18	9	2	17	5	2	19	1	2								
Durley Chine	..	0	14	5	0	11	6	0	17	0	2	0	1	1	8	1	3								
Meyrick Park, Ladies'	..	0	1	11	0	1	1	0	1	0	0	2	9	0	7	3	0								
" " Gents'	..	0	1	4	0	1	6	—	0	1	9	0	4	9	0	6	5								
Cemetery, Gents'	..	1	6	10	0	19	5	0	15	0	1	9	0	1	0	7	1								
" " Ladies'	..	0	15	4	0	10	10	0	11	0	0	16	7	0	11	5	0								
Durley Road, Gents'	..	0	1	7	0	2	8	0	2	7	0	5	1	0	19	11	8								
East Cliff, Ladies'	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
" " Gents'	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
Emporium	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
Entertainments	..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—								
Total.	36	7	331	14	636	7	471	3	967	7	767	9	1141	10	7178	6	6153	13	1066	12	239	13	5919	10	7

## WATER METERS.

The following is a comparative statement of the consumption of water supplied by the Gas and Water Company to your Authority for the years 1909 and 1910.

Situation of Meter.		Consumption in 1909.	Consumption in 1910.
Cabstand, Littledown Road	...	6,400	5,700
" St. Swithun's Road	...	8,800	12,200
" Waverley Road	...	7,200	10,400
Fire Station, Holdenhurst Road	...	83,400	88,900
Cabstand, Meyrick Road	...	18,500	19,000
" Madeira Road	...	24,300	23,900
Borough Offices	...	193,300	177,500
Yelverton Chambers	...	27,800	24,700
West Gardens Tennis	...	5,900	5,900
Corporation West Yard	...	60,600	67,700
Wharf Road Depot	...	46,900	54,700
Drinking Trongh, Chine Road	...	103,400	203,100
Cabstand, Durley Road	...	4,000	1,100
" West Cliff Road	...	15,300	13,400
" No. 1, West Cliff	...	14,300	19,000
" Exeter Road	...	3,100	9,100
West Fire Station	...	26,600	21,400
Mess Room, Westover Gardens	...	3,500	3,700
Engine House in Gardens	...	743,900	921,200
Lansdowne Drinking Trongh	...	56,300	75,900
Cabstand, Charmminster Road	...	7,700	6,400
Cemetery, Wimborne Road	...	134,400	113,200
The Refuse Destructor	...	51,100	54,700
Alum Chine Cliff Gardens	...	24,100	18,900
Cabstand, Gervis Road	...	3,400	3,000
" Derby Road	...	5,800	6,900
Knyveton Road	...	5,600	3,700
Boscombe Gardens	...	52,800	49,300
East Yard	...	471,800	299,000
Cabstand, Spa Road	...	11,200	18,400
" Adeline Road	...	17,700	14,900
" Palmerston Road	...	3,200	3,000
Boscombe Depot	...	82,500	34,800
King's Park	...	43,100	20,500
East Cemetery	...	69,000	71,000
Sanitary Hospital	...	662,000	581,400
Parkwood Road	...	68,500	94,000
Queensland Road	...	14,100	13,400
Rosebery Road	...	22,600	23,400
Clarence Park Road	...	20,200	10,100
Stourwood Avenue	...	3,000	2,000
Clifton Road	...	39,500	43,400
Stourwood Road	...	9,900	7,900
Fountain, Parkwood Road	...	27,800	28,100
Boscombe Cliff Gardens	...	15,700	40,200
Wharncliff Road	...	9,400	10,800
Electric Car Sheds	...	86,600	183,100
Knyveton Gardens	...	19,400	13,000

Meyrick Park Pavilion and Mr. Curtis' Workshop ..	89,100	118,800
*Golf Club, i.e., Caddies' Shelters ..	116,200	167,100
Bourne Avenue Cabstand ..	46,700	45,700
Urinal, Westbourne ..	73,300	73,200
,, Triangle ..	75,000	89,300
,, Bourne Avenue ..	95,100	115,000
Ladies' Lavatory, Exeter Lane ..	117,400	115,200
Winter Gardens ..	320,700	247,400
Urinals, facing Pier ..	334,500	262,000
The Pier ..	307,700	208,100
,, (Special for Boats) ..	111,000	132,000
Urinal and Cabstand, The Westover ..	143,200	119,300
Urinal and Cabstand, Firs Glen ..	97,800	84,500
,, Lansdowne Crescent ..	120,400	102,700
Urinal and Fountain, Boscombe Gardens ..	90,000	91,200
Urinal, Carnarvon Crescent ..	73,200	111,400
Bournemouth School ..	82,500	64,000
Mess Room at Tram Sheds ..	161,100	98,200
Gervis Road Drinking Trough ..	13,200	15,700
Bowling Green, Meyrick Park ..	32,000	44,600
Christchurch Road Dépôt ..	56,200	53,400
West Refreshment Rooms (recoverable) ..	53,900	53,800
East Refreshment Rooms (recoverable) ..	65,800	54,900
Poole Hill Urinal ..	65,500	80,200
Alum Chine ..	59,100	63,700
Durley Chine ..	21,000	15,100
Boscombe Pier ..	63,800	67,000
The Square, for watering lines ..	9,400	6,200
Queen's Park Caddies' Shelter ..	30,300	28,500
Winton Recreation Grounds ..	80,000	49,200
Boscombe Refreshment Rooms (recoverable) ..	5,900	6,800
Pokesdown Tram Sheds ..	74,000	105,700
Argyll Gardens ..	36,100	30,100
Fountain, East Beach ..	18,700	9,100
Fountain, West Beach ..	10,500	14,200
Moordown Car Sheds ..	27,300	27,900
Queen's Park Golf Pavilion (recoverable) ..	86,900	109,600
Queen's Park Golf Links ..	118,300	123,800
East Beach Convenience ..	228,700	289,100
West Beach Convenience ..	193,500	224,500
East Cliff Urinal ..	19,600	30,200
Queen's Park Rifle Range ..	5,600	4,500
Nursery, King's Park ..	3,900	4,500
Alum Chine Refreshment Room (recoverable) ..	10,100	9,800
Durley Chine Refreshment Room (recoverable) ..	8,400	3,900
Pavilion, Winton Recreation Ground ..	20,900	21,000
	7,308,900	7,323,400

\*This meter supplies Bournemouth Golf Club, Meyrick Park Golf Club and Caddies' Shelter, Meyrick Park.

The total decrease on the various meters since the system of checking the meters has been in force is 10,812,400 gallons, an average gain of 1,802,066 gallons per annum.

The above list does not include the meter for Electric Generating Station, as the water used for the boilers since June, 1904, has been obtained

from artesian well. The consumption of water from the Company's supply for the six years is as follows:—

1905	1906	1907	1908	1909	1910
4,000	6,000	12,000	138,000	7,000	11,000

The increase in 1908 was due to defective pump for artesian well

#### STATEMENT OF ACCOUNTS.

Accounts rendered for:—	£	s.	d.
Sanitary inspections ... ...	226	16	0
Maintenance of patients at the Sanitary Hospital ... ...	412	3	6
Conveyance of patients to Sanitary Hospital and collecting and returning articles disinfected ...	17	12	0
Disinfection after non-notifiable disease ... ... ...	58	17	10
Cleansing of w.c.'s, etc., at Public Elementary Schools ... ...	72	0	0
Meter checking at Public Elementary Schools ... ... ...	9	0	0
Books, etc., as required by the Midwives Act ... ... ...	3	0	
Rent of Isolation Cottages ... ...	14	12	6
Rat Catcher's services ... ...	28	3	5½
Hire of P.M. Room and special services rendered at Mortuary ...	1	16	0
Ambulance hire ... ... ...	1	11	6
Disinfectants supplied ... ...	5	6	

REPORT  
ON THE WORKING OF THE  
SALE OF FOOD AND DRUGS ACT

*During the Year 1910.*

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Mr. W. Pearce was appointed in June, 1910, as Inspector for carrying out the special duties under the above Acts. He has paid particular attention to the methods of sampling, and official samples have only been taken after careful and systematic enquiries and investigation. It is therefore most satisfactory to be able to report that the record standard of 1909, although not maintained, yet it has not much lowered, as can be seen from the following table.

	1909		1910	
	Adulter- ated. per cent.	Poor or Doubtful per cent.	Adulter- ated. per cent.	Poor or Doubtful per cent.
Official	4.33	13.72	Official	5.24
Unofficial	8.14	8.14	Unofficial	15.0
Total	5.24	12.4	Total	9.3
				15.0
				3.0
				8.0

In each case of reported adulteration the question has been referred to and considered by the Town Clerk and Medical Officer of Health, and the adulterations have been of so technical and unimportant a character that it was not considered necessary or advisable for prosecutions to be enforced in any case.

The vendors were, however, informed in all instances where an adverse report was received, and all letters of explanation received were submitted and considered by your Authority.

During the year 1910 a total of 398 samples of various foods and drugs were purchased, of which number 298 samples were formally purchased in accordance with the provisions of the Acts; and 100 samples were purchased informally and submitted as "test" samples to the Analyst.

Of 398 samples, 329, or 82.66 per cent., were reported genuine; 32, or 8.04 per cent., poor or doubtful quality; and 37, or 9.3 per cent., adulterated or in some way deficient.

Tables shewing the various articles analysed during the year, with the results of analyses, will be found in the Public Analyst's Report, tables 2 and 3.

#### NEW MILK.

One hundred and fifteen samples were officially taken and submitted to the Public Analyst. They were taken from retail vendors in the Borough and of these six were reported to be deficient in cream—23, 3,  $1\frac{1}{2}$ , 3, 12, and  $2\frac{1}{2}$  per cent.—and three to contain added water—9,  $4\frac{1}{2}$ , and 2 per cent.

In eight cases letters of warning were written to the vendors whose samples proved to be below the minimum standards, and in each case it was decided to accept the explanation of the vendor as to the causes which had contributed to the poor quality of the milk.

No sample contained preservative.

## COLOURED SAMPLES OF MILK.

In all cases where the Borough Analyst has reported excessive colouring of milk, the vendors have been informed by letter, and a request made that the practice should be discontinued. These requests have unfortunately not been fully complied with, but the general practice has been for the vendors to reduce the colouring matter to that minimum now almost universally adopted and recognised throughout the country by the large dairies. There is really no necessity for colouring milk at all, particularly in this Borough, where the standard of milk is uniformly higher, throughout the year, than the legal standard in force.

## CONDENSED MILK.

Of the three samples of condensed milk purchased for analysis two were found to have been prepared from genuine milk and the third sample from milk deficient in milk fat to the extent of 0.3 per cent.

In each case the "directions" printed on the tin were of a most misleading character, and when followed, the essential principles of the resulting mixture were not present in the amount required in genuine milk.

A report upon the samples was forwarded to the Board of Agriculture and Fisheries, with a view to enlisting the help of the Board and Customs House officials in preventing the further sale of one brand.

## CHOCOLATES.

Only one sample of chocolates was sent to the Analyst during the year, and this was of peculiar and undesirable composition. The chocolates were

sold under the name of "Chocolate Hypocrites," and consisted of an outer shell of chocolate filled with a syrupy fluid, which was given an intensely pungent flavour by the addition of capsium.

A letter of caution was sent to the wholesale firms supplying these sweets, with the result that the same were withdrawn from sale in this Borough.

### GORGONZOLA CHEESE.

Of the six samples of gorgonzola cheese submitted for analysis, three were adversely reported upon. Each of these three samples was coated with a rind containing a large percentage of mineral matter—Barium Sulphate. The rind of genuine "gorgonzola" is free from Barium Sulphate and is of the nature of hardened cheese.

Barium Sulphate is a heavy mineral substance costing only about five shillings per cwt., so that in cases where the proportion of rind to cheese is high, its presence in the rind in such percentages—72 to 75 per cent.—as obtained in the three adulterated samples, is to the prejudice of the purchaser.

At the time of receipt of the Analyst's certificates, notice of appeal, against a conviction for the sale of this "coated" cheese, was given by one Company, and, as it was felt that the decision of the Higher Court would influence subsequent proceedings in similar cases, it was decided not to take proceedings in respect of the samples purchased in this Borough. Letters of warning were written to the vendors of the cheese and the article was promptly withdrawn from sale.

## PRESERVATIVES AND COLOURING MATTERS.

The following table shows the number of articles analysed during 1910, which were reported by the Analyst to contain some preservative or colouring matter:—

No. of samples analysed.	Article.	Preservative.					Remarks.
		Salicylic acid.	Boric acid.	Sulphurous acid.	Peroxide of Hydrogen.	Colour.	
<b>OFFICIAL SAMPLES.</b>							
115	New Milk ..	—	—	—	—	100	Annatto colouring : mere traces to large traces
7	Separated Milk ..	—	—	—	1	7	Annatto colouring : mere to large traces ; No. 110 contained .006 per cent. of peroxide of hydrogen
26	Butter ..	..	13	—	—	—	.20 to .45 per cent.
3	Margarine ..	..	1	—	—	—	.12 per cent.
6	Sausages ..	..	6	—	—	—	.16 to .32 per cent.
9	Mincemeat ..	..	2	1	—	—	No. 290, trace of salicylic acid ; No. 296, .52 grains per lb. of salicylic acid ; No. 297, .12 per cent. of boric acid
<b>UNOFFICIAL SAMPLES.</b>							
10	Butter ...	..	2	—	—	—	.13 and .32 per cent
6	Margarine ..	..	4	—	—	—	.12 to .16 per cent.
4	Jam ..	..	1	—	—	—	.28 grains per lb.
8	Sausages ..	..	8	—	—	—	.29 to .53 per cent.
3	Spinach ..	..	—	—	—	1	Copper sulphate 3 grains per lb.
8	Rice ...	..	—	—	—	5	Talc, .13 to .30 per cent.
8	Pearl Barley ..	..	—	—	—	1	Talc, .25 per cent.
1	Orange Wine ..	..	—	1	—	—	1.14 grains per pint
4	Lemon Squash ..	..	2	—	2	—	1 No. 29, salicylic acid, .05 per cent. ; No. 37, salicylic acid, .02 per cent. ; Nos. 36 and 37, sulphurous acid .01 per cent. ; No. 37, contained a quantity of coal tar dye
5	Lime Juice Cordial	3	—	4	—	1	Nos. 31, 32 and 41 contained .03, .27 and .01 per cent. salicylic acid ; Nos. 32, 33, 34 and 41 contained .006 to .01 per cent. sulphurous acid ; No. 31 contained a little coal tar dye
3	Syrups ..	..	2	—	—	—	.003 and .007 per cent.
226			10	35	7	1	116

I have much pleasure in testifying to the loyal and cheerful assistance rendered at all times by the District Sanitary Inspectors, Messrs. Lewis, Phillips, Adams, Carter, the Workshops' Inspector Mr. Smith, the Food Inspector, Mr. Pearce, the Infectious Diseases Enquiry Officer, Mr. Christie, the Clerks, Messrs. White and Wheeler, and all the employees of the Department.

The esprit de corps of the Department is all that one could wish, and all are impued with the desire to enhance and maintain the sanitary reputation of this beautiful and natural Garden City.

It is mainly to this spirit and to the confidence and support given to the Department by the owners of properties, architects, builders, and plumbers, that the large amount of administrative work has been effected without any serious friction and without having resource to magisterial aid in a single instance throughout the year.

It would be impossible without this mutual confidence existing between the building trade and your Authority to maintain the existing high standard of sanitary work in the Borough.

In conclusion I beg to thank the Chairman and Members of the Sanitary Committee for their careful consideration of the questions brought before their notice, and also for the kind encouragement and assistance they have given to the Department at all times.

I have the honour to remain,

Mr. Mayor and Gentlemen,

Your obedient servant,

WM. GEO. COOPER,

Chief Sanitary Inspector.

COUNTY BOROUGH OF BOURNEMOUTH.

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## ANNUAL REPORT

OF THE

## PUBLIC ANALYST

*For the Year ending 31st December, 1910.*

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TO THE MAYOR AND TOWN COUNCIL,  
BOURNEMOUTH.

Gentlemen—

I have the honour of submitting for your consideration my Report on the Analysis of the samples of Food and Drugs sent to me during the year 1910.

The total number of samples was 398, of which 298 were officially taken under the provisions of the Food and Drugs Acts and 100 were unofficial or "test" samples. Of the official samples 22 proved to be adulterated or deficient in some important ingredient, and 29 were of poor or doubtful quality, whilst 15 of the unofficial samples were adulterated and 3 were of poor or doubtful quality. The percentage of adulterated samples was 9.3, and of poor or doubtful samples 8.04. Table I. shows the comparison of these results with those of former years:—

**Table I.**

Year	Adulterated	Poor or Doubtful
1902.	15·8 per cent.	11·8 per cent.
1903.	12·3 „ „	9·0 „ „
1904.	16·6 „ „	14·3 „ „
1905.	14·0 „ „	11·6 „ „
1906. (official)	9·0 „ „	13·3 „ „
„ (unofficial)	18·0 „ „	10·0 „ „
„ (total)	11·25 „ „	12·5 „ „
1907. (official)	8·0 „ „	14·0 „ „
„ (unofficial)	12·0 „ „	9·0 „ „
„ (total)	9·0 „ „	12·75 „ „
1908. (official)	7·0 „ „	12·0 „ „
„ (unofficial)	18·0 „ „	16·0 „ „
„ (total)	9·75 „ „	13·0 „ „
1909. (official)	4·33 „ „	13·72 „ „
„ (unofficial)	8·14 „ „	8·14 „ „
„ (total)	5·24 „ „	12·4 „ „
1910. (official)	7·38 „ „	9·73 „ „
„ (unofficial)	15·0 „ „	8·0 „ „
„ (total)	9·3 „ „	8·04 „ „

Tables II. and III. show in greater detail the results obtained with the official and unofficial samples respectively:—

**Table II.**

Summary of Annual Report, 1910 (298 official samples):—

ARTICLE	No. of Samples	Genuine	Poor or Doubtful	Coloured	Contained	Perservative	Adulterated	Percentage Adulterated	REMARKS
New Milk ..	115	83	23	100	0	9	7·38	Nos. 20, 96, and 298 contained 9, $4\frac{1}{2}$ and 2 per cent. added water. Nos. 75, 91, 117, 127, 128, and 130 were deficient in cream 23, 3, $1\frac{1}{2}$ , 3, 12 and $2\frac{1}{2}$ per cent.	
Separated Milk	7	5	—	7	1	2	28·6	No. 190 contained .006 per cent. of peroxide of hydrogen. No. 198 contained $1\frac{1}{2}$ per cent. added water	
Butter ..	26	26	1	—	13	—	0	Boric acid 20·45 per cent.	
Margarine ..	3	3	1	—	1	—	—	No. 103 boric acid 12 per cent.	

Cheese ..	...	12	9	—	—	—	3	25·0	Nos. 218, 222 and 223 contained 25·2, 22·0 and 5·2 per cent. barium sulphate
Condensed Milk	3	—	2	—	—	—	1	33·3	See note below
Lard ..	21	21	—	—	—	—	—	0	
Dripping ..	2	2	—	—	—	—	—	0	
Bread ..	1	1	—	—	—	—	—	0	
Sausages ..	6	4	—	—	6	2	33·3	Nos. 159 and 161 contained 0·31 and 0·32 per cent. boric acid	
Potted Meats ..	5	5	—	—	—	—	—	0	
Marmalade ..	7	6	1	—	—	—	—	0	
Oatmeal ..	11	11	—	—	—	—	—	0	
Pepper..	12	12	—	—	—	—	—	0	
Mincemeat ..	9	9	—	—	3	—	—	0	No. 290 contained trace salicylic acid. No. 296 contained 52 grains salicylic acid per lb. No. 297 contained 12 per cent. boric acid
Malt Vinegar ..	8	7	—	—	—	—	1	12·5	Was wood vinegar
Whisky ..	4	4	—	—	—	—	—	0	
Brandy ..	4	4	—	—	—	—	—	0	
Soda Water ..	1	—	—	—	—	—	1	100	Contained no "Soda"
Chocolates ..	1	—	—	—	—	—	1	100	Contained capsicum
Olive Oil ..	7	7	—	—	—	—	—	0	
Drugs ..	33	28	3	—	—	—	2	6·67	
	—	—	—	—	—	—	—	—	
	298	247	29	107	24	22	—	7·38	

Table III.

Summary of Annual Report, 1910 (100 unofficial samples):—

ARTICLE	No. of Samples	Poor or Doubtful			Contained Pervasive	Percentage Adulterated	REMARKS
		Genuine	Coloured	2			
New Milk ..	2	—	—	—	—	100	Deficient in cream 7 and 11 per cent.
Butter ..	10	10	—	—	2	—	0 Boric acid .13 & .32 per cent.
Milk-blended							
Butter	1	1	—	—	—	—	0
Margarine ..	6	5	1	—	—	—	0
Demerara Sugar	4	4	—	—	4	—	0
Jam ..	4	3	1	—	1	—	0
Pickles ..	7	7	—	—	—	—	0
Sauce ..	4	4	—	—	—	—	0
Sausages ..	8	—	—	—	8	8	100 Boric acid .29—.53 per cent
Dried Peas ..	7	7	—	—	—	—	0
Spinach ..	3	2	—	1	—	1	33 $\frac{1}{3}$ Contained sulphate of copper 3 grains per lb.
Arrowroot ..	5	5	—	—	—	—	0
Sago ..	4	4	—	—	—	—	0

Rice .. ..	8	8	—	5	—	—	0	Talc '13 to '30 per cent.
Pearl Barley ..	8	7	—	1	—	1	12·5	Talc '25 per cent.
Orange Wine..	1	—	—	—	1	1	100	1·14 grain sulphurous acid per pint
Lemon Squash	4	3	1	1	3	—	0	
Lime-Juice								
Cordial	5	3	—	1	5	2	40·0	Nos. 32 and 34 contained '22 and '24 grain of lead per gallon
Syrups... ..	3	3	—	—	2	—	0	
Ground Ginger	5	5	—	—	—	—	0	
Cream of Tartar	1	1	—	—	—	—	0	
	—	—	—	—	—	—	—	
	100	82	3	9	26	15	15	

These figures show a distinct rise in the proportion of adulterated samples as compared with 1909, but with the exception of 1909 and 1907 the proportion is the lowest on record. This rise in adulterated samples is, however, counter-balanced by the considerable diminution in the "poor" or "doubtful" class, viz., 8.04 per cent., the lowest previously having been 9 per cent. in 1903, and 11.6 per cent. in 1905.

When examined in detail there is little in this year's results to call for special mention, a few points, however, deserve to be recorded.

## MILK.

Excluding the 11 adulterated samples, the average results of 106 samples have been:—Milk fat, 3.62 per cent; non-fatty solids, 8.83 per cent., which figures are near the average of genuine new milk, viz., 3.75 and 8.88 respectively. The averages for the four quarters of the year have been:—

1st Quarter	35 samples	Fat, 3·61 %	Non-fatty solids, 8·77 %
2nd „	24 „	3·50 %	8·85 %
3rd „	34 „	3·72 %	8·87 %
4th „	13 „	3·65 %	8·84 %

The percentage of coloured samples has again been extremely high, viz., 87 per cent., and, more-

over, the amount of colouring used has shown a distinct increase in many samples. The use of colouring matter can have only one object, viz., to deceive the purchaser, and as the practice does not appear to be going out of fashion it is a grave question whether such should not be stopped by legal proceedings on the ground that milk colour is not of the "nature" of milk. It cannot be urged that the colour is necessary for the purpose of "preparing" the article for sale, milk being a natural product, and if it be said that the public demand milk of a good rich colour it is surely not unreasonable to expect the dairymen who have themselves created this demand to educate their customers back to the natural article. Probably a circular to all milk vendors in the Borough notifying that the Sanitary Authority will require milk to be sold in its natural state, would be all that is required to secure the desired end. A similar plan was adopted in a large Midland town some years ago, and coloured milk is there quite the exception.

All the milk samples were tested for added Preservatives, but in no case was any found to be present in new milk, but one sample of separated milk contained Peroxide of Hydrogen in considerable amount.

The 11 adulterated samples were as follow:—

	5 per cent. or under	Added water.	Deficient in fat.
Over 5	„ but under 10 per cent.	2	4
" 10	„ „ 15 „	1	1
" 15	„ „ 20 „	—	2
" 20	„ „ 25 „	—	—
			1

### BUTTER.

During the year 36 samples were taken, and of these none was found adulterated—this is a most satisfactory result. The proportion of water varied

from 8.61 to 15.86 per cent., with an average of 13.34 per cent. Fifteen of the samples contained Boron preservative in amount from .13 to .45 per cent. of Boric Acid.

### MARGARINE, LARD, DRIPPING.

These, as well as the later samples of Butter, were tested for Paraffin, but in no case was this adulterant found.

### CONDENSED MILK.

Three samples were submitted to me and serve as fairly good examples of the grossly inaccurate statements sometimes made on the labels of manufactured goods of this class. Sample No. 2 bore a label directing, "for puddings, etc., add 4 or 5 parts of water. For children under 3 months use 14 parts of water, 3 months and upwards less diluted, but never below one part of milk to 7 of water." This sample when diluted according to directions for puddings, the resulting milk would contain from 2.13 to 2.53 per cent. of fat, and from 5.45 to 6.49 per cent. of non-fatty milk solids; when diluted with from 7 to 14 parts of water as directed for young children, the "milk" will contain from 0.88 to 1.61 per cent. of fat, and from 2.25 to 4.13 per cent. of non-fatty milk solids, whereas human milk contains on an average 3.75 of fat and 8.75 per cent. of non-fatty solids! This is starvation to the child, who at the same time receives a considerable amount of the easily fermentable cane or beet sugar with which the Condensed Milk is sweetened.

The labels of No. 3 and 4 also directed dilution with 4 to 5 parts of water, and contained less fat than No. 2; No. 4 was prepared from partially skimmed milk.

## SAUSAGES.

The whole of the 14 samples contained Boron preservative, the amount varying from 0.16 to 0.53 per cent. of Boric Acid. The actual quantities were:—

OFFICIAL SAMPLES.		UNOFFICIAL SAMPLES	
No. 157	- .16 per cent.	No. 1	- .53 per cent.
158	- .16 ,,	2	- .52 ,,
159	- .31 ,,	3	- .34 ,,
160	- .25 ,,	4	- .40 ,,
161	- .32 ,,	5	- .29 ,,
196	- .19 ,,	6	- .41 ,,
		7	- .39 ,,
		8	- .40 ,,

In the Local Government Board Report No. 6, Dr. A. W. J. McFadden refers to the use of preservatives in sausages, etc., as follows (p. 34):—"Some of the objections above set out to the use of chemical antiseptics in canned meats apply also to such articles as sausages, pork pies, mince-meats, brawns, and the like, which are not preserved by canning or cold storage, but in the ordinary course of trade may be kept for several days on the shop counter and similar places. If on the ground of public convenience and trade requirements the use of chemical antiseptics is permitted in these articles, it appears very desirable that their employment should be restricted within narrow limits. Quantities of boric acid are not seldom reported by public analysts in some of these goods, which cannot be otherwise than prejudicial in themselves, besides being wholly unnecessary. If Boron preparations are used for this purpose, a limit of  $\frac{1}{4}$  per cent. of boric acid would probably be ample to meet legitimate trade requirements, and even in this case it appears desirable to consider whether notification of the presence of the

preservatives should not be given to the purchaser. Judged by this limit of .25 per cent., no fewer than 10 of the 14 samples must be considered to be adulterated, 8 of these being unofficial samples.

A case was heard in Hull early in the year, the offence being the addition of 0.43 per cent. of boric acid to potted meat; in convicting the vendor, the Stipendiary Magistrate said "a purchaser might reasonably expect to find a certain quantity of preservative in potted meat," yet "on the weight of evidence I am of opinion that boric acid in appreciable quantities having a harmful effect on the digestion, a purchaser would not reasonably expect to find it in as large a quantity as 30.1 grains per lb."

Potted meat is consumed in comparatively small quantity, whereas sausages are sometimes eaten in large amount, hence a maximum of .25 per cent. does not appear unduly severe upon the makers and vendors. .25 per cent. is equivalent to  $17\frac{1}{2}$  grains per lb., a man eating half a pound (about three sausages) would therefore take nearly 9 grains of boric acid, which is a medium medicinal dose, the British Pharmacopœia giving the dose as 5 to 15 grains. In the case of Nos. 1 and 2 (unofficial samples)  $\frac{1}{2}$  lb. would contain 18 and  $18\frac{1}{2}$  grains, *i.e.*, more than the maximum medicinal dose.

### DRIED PEAS.

It will be noted that none of these contained Copper, which is commonly used freely for colouring bottled peas.

### RICE.

Of 8 samples 5 were faced with talc, which is used for the purpose of giving a polish. In no case

was the amount above the limit suggested in Dr. Hamill's report issued by the Local Government Board.

### PEARL BARLEY.

Sample No. 8 (unofficial) contained 0.25 per cent. of talc, which can only be considered as an adulteration. Pearl Barley is chiefly used for feeding young children and for making a demulcent drink for invalids, no extraneous (and entirely needless) additions should be allowed.

It is a matter of satisfaction to note, in conclusion, that Dr. J. M. Hamilton, in his Report to the Local Government Board on "the presence of Calcium Sulphate in baking powder and self-raising flour," just published, has recommended the adoption of a limit of 10 per cent. of Sulphate of Calcium as a maximum in Acid Phosphate of Calcium used for Phosphate baking powders, etc., as suggested by your Analyst in the Annual Report for 1908.

I am, Mr. Mayor and Gentlemen,

Your obedient servant,

R. A. CRIPPS.

